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A comparative study of innovative work behavior in the public and private sectors: the impact of organizational culture and psychological safety

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ABSTRACT

Innovative Work Behavior (IWB) is increasingly important for organizational effectiveness, yet the cultural and psychological mechanisms that support it may differ across institutional contexts. Drawing on Social Exchange Theory (SET), this study examined the relationships among Ambidextrous Organizational Culture (AOC), Psychological Safety (PS), and IWB in Indonesia's public and private sector. A cross-sectional survey was conducted with 498 public-sector and 461 private-sector employees using psychometrically validated measures of AOC, PS, and IWB. The proposed relationships and sectoral differences were tested using SEM and multigroup mediation analyses. The results showed that AOC was positively associated with IWB in both sectors. PS also positively predicted IWB and partially mediated the relationship between AOC and IWB. However, the indirect effect of AOC on IWB through PS was considerably stronger in the private sector ($\beta=0.336$, indirect effect = 0.307, 95% CI [0.268, 0.345], $p<0.001$) than in the public sector ($\beta=0.099$, indirect effect = 0.087, 95% CI [0.063, 0.110], $p<0.001$). These findings extend the IWB literature that AOC promotes IWB through PS, but this mechanism is shaped by institutional context. The study also highlights the importance of sector-specific Human Resources practices in fostering employee innovation.

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Introduction

Increasing global competition and market uncertainty have made innovation a critical source of organizational competitiveness and long-term sustainability (Wang et al., 2018; 2024). Organizations increasingly view employees as strategic assets capable of generating and implementing novel ideas that drive organizational performance because individuals ultimately initiate innovation (Getz & Robinson, 2003; Mariz-Perez et al., 2012). At the individual level, this capability is reflected in innovative work behavior (IWB), defined as the intentional generation, promotion, and implementation of new ideas, processes, or methods that contribute to organizational effectiveness (Janssen, 2000; Scott & Bruce, 1994). Interest in IWB has grown substantially because it enables organizations to adapt to environmental change, improve efficiency, and sustain competitive advantage through continuous innovation (Liu et al., 2019). Unlike routine task performance, IWB involves proactive efforts to develop and apply novel solutions that support organizational renewal and growth. Given its significant contribution to innovation outcomes and organizational success, identifying the organizational conditions that foster IWB has become an important research priority (Afsar & Umrani, 2019).

This study focuses on ambidextrous organizational culture (AOC) as a strategic organizational context that fosters IWB. Organizational ambidexterity, as a metaphor referring to firms' ability to explore new competence and exploit existing ones, has attracted considerable interest (Gibson & Birkinshaw, 2004; Raisch et al., 2009; Simsek et al., 2009). Through this dual emphasis on exploration and exploitation, AOC

is considered particularly relevant in fostering employees' IWB, as it provides both the flexibility and structural support needed for idea generation and implementation.

A key internal mechanism linking organizational culture to innovative behavior is psychological safety (PS). An AOC creates an environment in which employees feel safe to express ideas, experiment, and take interpersonal risks by balancing exploration and exploitation. Extensive research has shown that PS positively influences both individual and organizational outcomes and frequently serves as a mediating mechanism through which organizational conditions affect employee behavior (Carmeli et al., 2010; Chen et al., 2014; Kyambade et al., 2024). Although PS was originally conceptualized as a shared team belief regarding the safety of interpersonal risk-taking (Edmondson, 1999), this study adopts an individual-level perspective, focusing on employees' personal perceptions of PS (Carmeli et al., 2010).

This approach extends prior research that has predominantly emphasized the collective-level conceptualizations of PS. Drawing on Social Exchange Theory (SET), we argue that AOC functions as an organizational resource that fosters employees' perceptions of PS, which in turn promotes IWB. Employees are more likely to reciprocate through discretionary innovative efforts when they perceive organizational support for both experimentation and operational excellence, particularly when they feel safe to voice ideas, challenge existing practices, and engage in risk-taking behaviors (Blau, 1964; Cropanzano & Mitchell, 2005).

However, despite the growing body of research on IWB, less attention has been devoted to understanding whether the psychological mechanisms linking organizational culture to IWB operate similarly across different institutional contexts. Previous studies have demonstrated that psychological safety (PS) functions as an important mechanism through which supportive organizational conditions foster IWB (Carmeli et al., 2010; Liu et al., 2019). Nevertheless, these studies have generally treated this mechanism as contextually uniform, with limited attention to whether its explanatory strength varies across organizational environments characterized by different institutional logics. In particular, little is known about whether PS plays an equally important role in translating employees' perceptions of an AOC into IWB in public and private sector organizations. Addressing this gap enables a more context-sensitive understanding of the conditions under which organizational culture is translated into IWB.

According to Priyanka et al. (2022), organizational ambidexterity may have different implications across sectors due to variations in institutional characteristics, governance structures, and organizational priorities. The public sector operates within a unique institutional environment characterized by formal regulations, bureaucratic structures, and strong accountability demands as an entity funded by and accountable to the public under governmental control. The public sector is defined as an entity funded and owned by the public, controlled by the government, privately funded, and determined by market forces (Johnson, 2020). Furthermore, research related to the AOC and IWB was mostly conducted in the private sector (Kandoth & Shekhar, 2025; Liu et al., 2019; Wang & Rafiq, 2014). Kousina and Voudouris (2023) conducted the research in the public sector but focused on ambidextrous leadership in IWB regarding the culture. Thus, the AOC still needs to be further explored regarding the variables.

Literature review and hypothesis development

The relationship between innovative work behavior, ambidextrous organizational culture, and psychological safety

IWB is shaped by a constellation of interrelated individual and organizational factors that collectively influence employees' capacity and willingness to generate, promote, and implement innovative ideas. Several studies have examined various predictors of IWB, such as individual diversity (Korzilius et al., 2017; Schaffer et al., 2012), employee voice (Botha & Steyn, 2022), personality (Åmo & Kolvereid, 2005; Madrid et al., 2014; Østergaard, et al., 2011; Woods et al., 2018), motivation (Kandoth & Shekhar, 2025; Saether, 2019), age (Kandoth & Shekhar, 2025; Song et al., 2026), competitive attitude and behavior (Wang et al., 2018), positive affect (Hennessey & Amabile, 2010), and psychological safety (Bysted & Jespersen, 2014; Zhang et al., 2023). In organizational factors, IWB has been influenced by organizational climate (Baer & Frese, 2003; Cangialosi et al., 2020; Imran et al., 2010), leadership (Afsar &

Umrani, 2019; Guo et al., 2025; Kafetsios et al., 2025; Larsson et al., 2025; Seung & Seo, 2024; Wahab et al., 2024; Wang et al., 2024; Zheng et al., 2011), organizational memory (Camison & Villar-Lopez, 2011; Chang & Cho, 2008; Jiménez-Jiménez & Sanz-Valle, 2011; Lai et al., 2011; Lee et al., 2011) and organizational culture (Liu et al., 2019; Opolot et al., 2026; Wang & Rafiq, 2014; Zhang et al., 2023).

Psychologists argue that environments have a contextual impact on people's behavior (Stojanovic et al., 2023). Organizational culture is a contextual factor that influences IWB. Organizational culture is important because the sequence of innovation processes presents both contextual and interpersonal risks for workers (Zhang et al., 2023). Organizational cultures, such as collectivism (Seung & Seo, 2024), organizational learning culture (Ki et al., 2021), and ambidextrous organizational culture (Lee et al., 2011; Liu et al., 2019; Wang & Rafiq, 2014), have a positive relationship with IWB. This study examines organizational culture as a significant determinant that shapes the IWB of employees. Organizational culture is important because the sequence of innovation processes presents both contextual and interpersonal risks for workers (Zhang et al., 2023). Previous studies have demonstrated the positive impact of organizational culture on IWB, such as collectivism (Seung & Seo, 2024; Zhang et al., 2023) and organizational learning culture (Ki et al., 2021). AOC also influences an organization's ability to succeed in a dynamic and competitive business climate (Kandoth & Shekhar, 2025). AOC was chosen because it is developed in a bottom-up manner, emphasizing individual involvement and participation (Wang & Rafiq, 2014). AOC is often considered to influence an organization's ability to succeed in a dynamic and competitive business climate (Kandoth & Shekhar, 2025).

An AOC is an organizational culture that explores new competencies while simultaneously using existing ones (Lee et al., 2011; Liu et al., 2019; Wang & Rafiq, 2014). According to Wang and Rafiq (2014), AOC is shaped by two core cultural characteristics: organizational diversity and the shared meaning perceived by organization members, which conceptually represent exploration and exploitation orientations. Organizational diversity reflects a diversity of perspectives, experiences, mindsets, and ways of working that enable nonlinear thinking, experimentation, and pursuit of new ideas. Various studies have shown that cognitive diversity increases the variety of information and enriches perspectives, thereby strengthening exploration activities such as idea generation and creativity (Harrison & Klein, 2007; Hülshager et al., 2009; Van der Vegt & Janssen, 2003). Although composed of two conceptual aspects, these two characteristics operate simultaneously as a single cultural entity that characterizes an ambidextrous organization.

The relationship between AOC and IWB can be further explained through SET. Social exchange theory (Blau, 1964; Cropanzano & Mitchell, 2005) states that when an organization provides support, opportunities, and positive values, employees will feel a normative obligation to reciprocate through behaviors that benefit the organization. In the context of AOC, organizational diversity signals that the organization values creativity, risk-taking, and diverse intellectual contributions. This kind of support fosters a sense of recognition and trust, which, according to the reciprocity principle, encourages employees to reciprocate with exploratory activities, such as generating new ideas and seeking more innovative ways of working (Eisenberger et al., 2001). Meanwhile, shared meaning is associated with a stronger sense of attachment to a common goal and creates clarity of direction, thus fostering a sense of obligation for organizational members to engage in implementing ideas in a disciplined, structured manner and in alignment with organizational goals. Thus, AOC can simultaneously activate both exploration and exploitation through a positive social exchange mechanism, ultimately driving IWB without the need for additional mediators, such as an ambidextrous context.

On the other hand, PS has emerged as a significant personal factor bridging the development of IWB (Iqbal & Ahmad, 2021; Seung & Seo, 2024; Xu & Suntrayuth, 2022). This focus stems from the inherent risks associated with IWB (Ayoub et al., 2023). Employees often hesitate to participate in innovation unless they believe that potential failures will not have a negative impact. Fostering PS can motivate workers to embrace interpersonal risks and engage in innovative practices (Carmeli et al., 2010; Kyambade et al., 2024). The positive outcomes of PS for employees, such as enhanced organizational commitment (Chen et al., 2014) and improved team performance (Liu et al., 2019), demonstrate its importance. Employees are also more inclined to innovate when they feel secure in expressing their ideas without fear of criticism or punishment. This highlights the need to cultivate a work environment that is psychologically safe to promote innovation.

SET is used to explain the relationship of reciprocity between parties in the workplace context, leadership, organizational culture, and individual behavior (He et al., 2022; Iqbal et al., 2020; Morales-Rodríguez et al., 2020; Thneibat, 2024). SET focuses on the relation as transactional from an economic perspective (Homans, 1961), and behavior is a response to repaying what other individuals or the environment give to others (Cook et al., 2013). In this context, AOC has the reciprocity to enhance IWB. AOC can also enhance PS as a reciprocity dynamic, as it ensures a safe environment for employees. Furthermore, PS can also enhance IWB because it encourages productive behavior, such as IWB. On this basis, the following hypotheses are proposed:

H1a: AOC has a significant positive impact on IWB.

H1b: PS has a significant positive impact on IWB.

The mediating role of psychological safety on ambidextrous organizational culture and innovative work behavior

An ambidextrous work atmosphere increased employees' intrinsic motivation by addressing psychological needs and providing a sense of empowerment (Kandoth & Shekhar, 2025). Xu and Suntrayuth (2022) demonstrated that PS mediates the relationship between IWB and the innovation climate. Liu et al. (2019) found that employees' perceptions of AOC indirectly influence IWB through PS. Seung and Seo (2024) also confirmed PS as an intermediary variable in the promotion of IWB. This relationship can also be explained by SET, as PS is the result of social exchange between organizations that cultivate organizational ambidexterity and employees who feel valued and safe to take risks in IWB as a form of reciprocity for the culture and sense of safety they receive. This rationale underlies the selection of PS as a mediating variable.

Cropanzano and Mitchell (2005) argued that the process is not only about the reciprocity between contextual factors but also employee behavior. In some situations, affection influences the reciprocity relationship. SET may well provide a unitary framework for organizational behavior. However, given the current conceptual difficulties, even if this potential exists, it is unlikely to manifest. Our review returns to the foundational ideas of the explanatory power of SET: (a) rules and exchange norms, (b) resources exchanged, and (c) emergent relationships.

The relationship between an organization and its employees is built on the norm of reciprocity, meaning that when the organization provides support and positive treatment, employees are encouraged to reciprocate with behaviors that the organization's benefits. AOC, which consists of organizational diversity (Wang & Rafiq, 2014), creates this form of support. An environment that respects these differing perspectives enhances PS, the belief that one can express ideas without fear of interpersonal retribution (Edmondson, 1999). When an organization provides clarity and consistency of values, employees perceive this as a form of structural and emotional support that creates a reciprocal obligation to contribute through behaviors such as idea promotion and idea realization, which are two core components of the IWB (Janssen, 2000; Scott & Bruce, 1994).

Thus, PS functions as a mediator explaining how AOC generates IWB. AOC creates a positive social exchange environment through the values of diversity and clarity of purpose. This environment enhances PS (Edmondson & Lei, 2014), which encourages employees to actively engage in exploration and exploitation as a form of reciprocation for the support they receive. Therefore, within the SET framework, PS is a psychological mechanism that bridges the influence of AOC on increasing IWB. Prior research has identified PS as a critical mediating mechanism through which antecedent factors influence individual and organizational outcomes (Carmeli et al., 2010; Iqbal et al., 2020). However, the psychological processes and underlying mechanisms that explain how and why IWB occurs within an organization still need to be investigated. We also try to explain how internal factors play an important role in explaining the mechanism of the relationship between organizational factors and IWB from the contemporary perspective of SET.

From the SET perspective, we believe that explaining how internal factors play an important role in explaining the mechanism of the relationship between organizational factors and IWB will provide a valuable contribution to understanding the dynamics of organizational and internal factors to enhance IWB. We explore whether PS, a proxy condition for interpersonal risk-taking, transmits the AOC effect on

IWB. In addition, how is the mechanistic link from AOC to PS related to the ambidexterity that fosters exploration and exploitation, which can push PS in opposite directions if not balanced. We propose that the procedural reliability of balanced AOC signals will enhance exploration, which raises PS to enhance IWB. Thus, the hypothesis tested is:

H2: *PS fully mediates the relationship between AOC and IWB.*

The role of the private-public sector in the context: bureaucratic barrier versus market agility

Priyanka et al. (2022) showed that organizational ambidexterity has a different impact on public and private sector companies. The public sector is defined as an entity funded and owned by the public, controlled by the government, privately funded, and determined by market forces (Johnson, 2020). Furthermore, research related to the AOC and IWB was mostly conducted in the private sector (Kandath & Shekhar, 2025; Liu et al., 2019; Wang & Rafiq, 2014). Kousina and Voudouris (2023) conducted research in the public sector but focused on IWB ambidextrous leadership. Thus, the AOC still needs to be further explored regarding the variables.

According to the The Indonesian Central Bureau of Statistics (BPS RI, 2024), private sector workers are more engaged in innovative activities than those in the public sector. Many problems faced by public employees, such as public inequity in service delivery, citizen dissatisfaction, and difficult working conditions for public servants (Goodsell, 2004; Hand & Catlaw, 2019), have often been defined with respect to the deteriorating relationship between public servants and citizens: governments are seen as impersonal and bound by red tape (Bozeman, 2000; De Vries et al., 2016). The public sector faces increased demands for new or better services, more cost-efficient solutions, and alternative ways of interacting with its citizens. Thus, innovation is needed to improve not only the effectiveness but also the problem-solving capacities of public sector organizations (Albury, 2011; De Vries et al., 2016). Innovation in public sector organizations is a critical issue as they strive to cope with unprecedented challenges due to fiscal, demographic, sanitary, and ecological pressures, along with rising citizen expectations for a more responsive and accountable government (Clausen et al., 2020).

Demircioglu and Audretsch (2017) stated that the contributions of studies on public sector innovation are still very limited, especially if the innovation is seen through the private lens. Public sector innovation faces different challenges (Clausen et al., 2020). Bysted and Jespersen (2014) examined the effect of the sector on IWB among the public sector and various private industries and found no sector effect on IWB. They describe that IWB is also possessed by public sector workers, even higher than in the private sector. The differences in characteristics between the public and private sector make it interesting to study how that culture also impacts innovations. Thus, this study offers an advanced analysis to explore the role of PS in the relationship between AOC and IWB within different groups, including the public and private sector. Therefore, this study stands out for its exploration of how employees' PS mediates the relationship between AOC and IWB.

Within the Indonesian context, the public sector is guided by the core values of 'BerAKHLAK', which are mandated by the Indonesian Civil Service Law and encompass service orientation, accountability, competence, harmony, loyalty, adaptability, and collaboration. Service Orientation, Accountability, Competence, Harmony, Loyalty, Adaptive, and Collaboration, as mandated by the Indonesian Civil Service Law. The 'adaptive' value reflects the government's strategic commitment to fostering innovation and continuous improvement across all levels of public service organizations, including frontline employees and staff members. This emphasis signifies a broader institutional shift in which innovation is increasingly regarded as a prerequisite for public value creation.

As governments confront complex societal problems, resource constraints, and escalating public expectations, innovation is essential not only for improving organizational effectiveness but also for maintaining public institutions' legitimacy and responsiveness. Moreover, organizational context may shape the strength and nature of these relationships. The indirect pathways linking AOC, PS, and IWB could differ between public and private sector organizations, especially in Indonesia, by implementing BerAKHLAK on public sector employees, which began to be implemented during the President Joko Widodo era. This implementation pushes innovation for the public sector in Indonesia as a key

value in the organization. Consequently, examining AOC within public and private sector contexts may provide a more nuanced understanding of how organizational environments shape employees' IWB.

Conversely, competitive market dynamics continuously pressure private sector organizations to balance operational efficiency with innovation, thereby embedding adaptability and experimentation into organizational culture and everyday work practices (Johnson, 2020). Compared to public institutions, private organizations tend to operate with greater flexibility, efficiency, and performance orientation, which often encourages innovation development as a strategic means of achieving organizational goals and sustaining competitiveness. Employees are generally expected to quickly adapt, generate new ideas, and contribute to continuous organizational improvement within such environments. Despite increasing scholarly attention to AOC, studies examining the relationship between AOC and IWB have predominantly been conducted in private sector settings (Kandoth & Shekhar, 2025; Liu et al., 2019; Wang & Rafiq, 2014).

Limited research in public sector contexts. Kousina and Voudouris (2023) investigated public sector innovation through the lens of ambidextrous leadership rather than organizational culture. Furthermore, the mechanisms through which AOC influences IWB, particularly through psychological processes such as psychological safety (PS), remain insufficiently explored across different organizational contexts. Despite these clear sectoral distinctions, empirical evidence comparing Indonesia's cultural-psychological pathways to innovation remains limited. Most existing research on AOC and IWB has focused on private-sector high-tech firms in Western or East Asian contexts (Zheng et al., 2011), leaving a 'research gap' regarding how these dynamics manifest in the bureaucratic environments of the Global South.

The differences in organizational characteristics in the public and private sector make it interesting to study how those characteristics also impact innovations. Thus, this study offers an advanced analysis to explore the role of PS in the relationship between AOC and IWB within different groups, including the public and private sector. Thus, this study stands out for its exploration of how PS mediates the relationship between AOC and IWB. The effect of AOC on IWB through PS will be stronger in the private sector than in the public sector. The study's results offer valuable insights by examining the critical role of PS in employees' perceptions of the supportive environment to enhance IWB. We assume that clarifying this pathway will inform stakeholders, such as Human Resources or leader, to build effective strategies and reliable interventions that produce IWB. Given these complexities, this study primarily aims to enhance our understanding of the mechanisms by which organizational culture shapes IWB across different institutional contexts. Specifically, this research pursues three main objectives: (1) to examine the direct effects of AOC and PS on IWB among Indonesian employees; (2) to investigate the mediating role of PS in the relationship between AOC and IWB; and (3) to conduct a comparative multigroup analysis to identify sector-based differences in the structural relationships among these variables. The relation shown as in Figure 1:

Therefore, there are three hypotheses for these relationships:

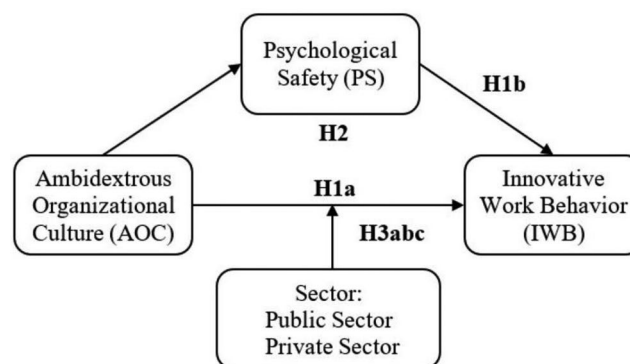


Figure 1. Research model illustrating the relationships among AOC, PS, and IWB.

H3a: The mediated relationship between AOC and IWB through PS differs significantly between the public and private sector.

H3b: The indirect effect of AOC on IWB through PS is significant in the private sector.

H3c: The indirect effect of AOC on IWB through PS is weaker in the public sector due to structural constraints.

Methodology

Research design

This study employed a quantitative, cross-sectional design to examine the structural relationships among public and private sector employees in Indonesia between AOC, PS, and IWB. A comparative multigroup framework was adopted to assess whether these psychological mechanisms operate differently across different institutional contexts. The questionnaire was administered cross-sectionally. Cross-sectional design is time-efficient and do not require long-term commitment from participants (Gravetter & Forzano, 2018). In organizational and occupational psychology, cross-sectional survey designs are widely used to examine perceptual and attitudinal constructs embedded within organizational environments (Podsakoff et al., 2003).

This research passed the research ethics review standards on October 28, 2024, from the Research Ethics Committee, Faculty of Psychology, Universitas Indonesia. The registered number: 169/FPsi. Komite Etik/PDP.04.00/2024. Participants gave written informed consent in the first part of the questionnaire, which allowed them to choose whether to participate in the research before they started. As compensation, participants were offered the chance to join the draw, provided by a different link besides the questionnaire's link. The 20 lucky participants were chosen through <https://www.randomresult.com/>.

Sampling strategy

Participants were recruited using a nonprobability sampling approach that combined organizational purposive sampling with individual-level convenience recruitment (Scholtz, 2021). This design was selected to ensure access to employees within organizational contexts relevant to the study objectives while maintaining feasibility across multiple institutions. Sample adequacy was evaluated using an a priori power analysis conducted with G*Power 3.1.9.7 (Faul et al., 2009). The analysis indicated that a minimum sample of 214 participants would be required to detect medium effect sizes ($f^2 = 0.15$), with the statistical power set at .95. The obtained sample size substantially exceeded this requirement, supporting the robustness of the statistical analyses, including multigroup comparisons.

Because employees were nested within organizations, the hierarchical structure of the data was considered in the analyses to minimize potential bias arising from non-independent observations. Therefore, we estimated cluster-robust standard errors at the organizational level using the TYPE=COMPLEX and CLUSTER procedures in Mplus (Muthen & Muthen 1998-2019). This approach adjusts parameter standard errors and model fit statistics for within-organization dependency, yielding more accurate statistical inferences without requiring a multilevel model specification. Before testing structural differences between public and private sector employees, we assessed measurement invariance using a multigroup CFA through multigroup confirmatory factor analysis. Establishing configural invariance demonstrated that the underlying factor structure of AOC, PS, and IWB was comparable across sectors, indicating that respondents in both institutional contexts conceptualized the constructs similarly. This provided an appropriate foundation for subsequent multigroup structural comparisons aimed at examining sectoral differences in the relationships among the study variables (Vandenberg & Lance, 2000).

Purposive sampling was used at the organizational level to capture public and private sector contexts. Public organizations were selected from government agencies undergoing bureaucratic reform, while private organizations were drawn from sectors with high innovation demands, including information technology, creative industries, and manufacturing. Organizations were recruited through institutional networks and professional collaborations; public agencies were approached via formal procedures; and private firms were contacted through management representatives. Participation was voluntary at the organizational and individual levels. Employees meeting the tenure criteria were invited to participate at

the individual level, with a minimum of two years of service required in the public sector and one year in the private sector to ensure sufficient organizational exposure and role familiarity.

Participants and screening data

A total of 1,103 responses were initially collected from 37 central agencies, 31 regional agencies, and 11 private subsectors. After a rigorous screening process, 144 cases were excluded because of incomplete responses, failure to complete attention-check items, or noncompliance with holding requirements. The final sample consisted of 959 employees, including 498 public and 461 private sector employees. Participants represent a wide demographic range in terms of education (secondary school to doctoral level) and organizational tenure (2 to over 20 years), thereby enhancing the variability and explanatory power of the data. Participant selection was conducted cross-sectionally by distributing online questionnaires. Data collection was conducted from October 29 to November 7, 2024. Three researchers focused on public sector participants, whereas two focused on the private sector.

Measurement instruments

All instruments were adapted into the Indonesian language using a back-translation procedure to ensure linguistic and conceptual equivalence (Beaton et al., 2000). A 6-point Likert scale was used to reduce central tendency bias (Moors, 2008), which is commonly observed in collectivist cultural contexts. In the validity analysis, all constructs were modeled as first-order factors.

Innovative work behavior

The innovative work behavior (IWB) was measured using Janssen's scale (2000). This instrument conceptualizes innovation as a multi-stage behavioral process, comprising: Idea generation (e.g. creating novel solutions), idea promotion (e.g. mobilizing support for new ideas), and idea realization (e.g. implementing ideas into practice). This scale was selected because it captures employee innovation as a behavioral sequence that aligns with contemporary psychological views of employee innovation. Janssen's definition is the most frequently cited definition and is consistently applied across the literature (AlEssa & Durugbo, 2022). It consists of 9 items with a 6-point Likert scale ranging from 'never' to 'always', with examples of items such as 'Looking for new work methods in my job'. The scale demonstrated excellent internal consistency in the current study' (Cronbach's $\alpha = 0.95$).

Ambidextrous organizational culture

The ambidextrous organizational culture (AOC) was assessed using the 7-item scale developed by Wang and Rafiq (2014). The instrument measures employees' perceptions of the organization's ability to balance: exploration, reflected in diversity of perspectives and openness to new ideas, and exploitation, reflected in shared vision, alignment, and coordinated action. AOC is measured as aggregate dimensions based on employee perception. This measure was chosen because it operationalizes ambidexterity at the employee perception level, which is particularly appropriate for psychological research examining how organizational context shapes individual behavior. This scale has a 6-point Likert scale ranging from 'strongly disagree' to 'strongly agree'. The example item is: 'We respect everyone's different points of view'. Internal consistency for this scale was high ($\alpha = 0.91$).

Psychological safety

Psychological safety (PS) was measured using the 5-item scale developed by Carmeli et al. (2010). The instrument assesses the extent to which employees perceive their work environment as safe for interpersonal risk-taking, such as speaking up, admitting mistakes, and proposing new ideas. This scale was selected because of its strong theoretical foundation in the social-cognitive and relational perspectives

Table 1. Reliability test results.

Variable	Developer	N item	Cronbach's α (piloting)	Cronbach's α	Category
IWB	Janssen (2000)	9	0.96	0.95	Excellent reliability
PS	Carmeli et al. (2010)	5	0.69	0.77	High reliability
AOC	Wang and Rafiq (2014)	7	0.94	0.91	Excellent reliability

Source: Derived from the study data.

Table 2. Item revision.

No	Items	Revision
PS1	I am able to bring up problems and tough issues.	I can openly raise difficult problems and issues.
PS2	People in this organization sometimes reject others for being different. (R)	People in this organization welcome the differences in opinion and background.

Note: Items PS with $Crit < 0.3$ (Nunnally & Bernstein, 1994).

of workplace behavior, as well as its demonstrated relevance to innovation-related outcomes. This scale consists of 5 items with a 6-point Likert scale ranging from 'very inaccurate' to 'very accurate'. An example of an item is: 'I feel safe taking risks in this organization'. 'Reliability in this study was acceptable' ($\alpha = 0.77$). All the measuring instruments have Cronbach's α above 0.7, as shown in Table 1. All the measuring instruments used in this study have high reliability (Taherdoost, 2016).

Based on the results of the piloting instrument, two items on the measuring instrument PS need to be improved according to expert judgment, and the lists the improvements made to these items on Table 2.

Control of the common method bias

Given the data's self-report, single-source, cross-sectional nature, common method bias (CMB) represents an inherent limitation that warrants transparent discussion. Procedural steps were taken during instrument design to reduce response pattern bias, including the placement of demographic and tenure items between predictor and criterion measures, and the randomization of item order within scales (Podsakoff et al., 2003, 2024). Statistically, Harman's single-factor test was conducted as a preliminary screening, with no single factor accounting for most of the variance (43.89%). However, this test is widely acknowledged as a weak and insufficient indicator of CMB and is reported here only for completeness rather than as substantive evidence (Richardson et al., 2009).

Full-collinearity variance inflation factors provided a more informative check, which ranged from 1.56 to 2.76, remaining well below the conservative threshold of 3.3 (Kock, 2015). This indicate that lateral collinearity driven by common method variance is unlikely to have severely distorted the structural estimates. Nevertheless, these steps reduce rather than eliminate this concern. The absence of a temporal separation between measurement occasions, an independent-source design, or a marker variable approach means that some degree of method-induced covariance cannot be ruled out. The reported associations should be interpreted with this limitation in mind, as future research using longitudinal or multisource designs would provide a stronger causal warrant for the relationships examined here.

Data analysis

Data were analyzed using Structural Equation Modeling (SEM). A Confirmatory Factor Analysis (CFA) was initially conducted to evaluate the measurement model's adequacy. Subsequently, structural relationships and indirect effects were examined. Before comparing structural relationships across sectors, Multi-Group Confirmatory Factor Analysis (MG-CFA) was used to assess measurement invariance, thereby supporting the appropriateness and comparability of the constructs across groups.

The mediation model was estimated as SEM in R using the Lavaan package (version 0.6-20), applying the robust maximum-likelihood estimator (MLR) to obtain parameter estimates with robust standard errors and a scaled test statistic (Rosseel, 2012; Rosseel et al., 2025). Missing data were handled using full-information maximum likelihood (FIML) in Lavaan, allowing all available information to contribute to estimation rather than relying on listwise deletion. Indirect effects were evaluated using nonparametric bootstrapping of the product term ($a \times b$), with 5,000 bootstrap resamples and 95% bootstrap confidence intervals. Mediation was inferred when the confidence interval for the indirect effect excluded zero.

Table 3. Demographic profiles of participants.

Variable		Public sector (N=498)		Private sector (N=461)	
	Category	<i>n</i>	%	<i>n</i>	%
Gender	Male	200	40.2	107	23.2
	Female	298	59.8	354	76.8
Tenure	1–3 years	46	9.2	194	42.1
	3–10 years	212	42.6	239	51.8
	> 10 years	240	48.2	28	6.1
Education	High school or equivalent	7	1.4	188	40.8
	Diploma	42	8.4	61	13.2
	Bachelor/Diploma IV	204	41.0	194	42.1
	Master	217	43.6	18	3.9
	Doctoral	28	5.6	–	–
Position	Managerial	29	5.8	56	12.1
	Nonmanagerial	442	88.8	364	79.0
	Non identified	27	5.4	41	8.9
Agency	Central government	355	71.3	–	–
	Local government	116	23.3	–	–
	Not identified	27	5.4	–	–
Status	Contract workers	–	–	178	38.6
	Permanent workers	498	100	254	55.1
	Not identified	–	–	29	6.3
Subsector	Basic Materials	–	–	3	0.7
	Industrials	–	–	11	2.4
	Consumer Non-Cyclicals	–	–	2	0.4
	Consumer Cyclicals	–	–	239	51.8
	Health care	–	–	7	1.5
	Financials	–	–	5	1.1
	Properties and Real Estate	–	–	1	0.2
	Technology	–	–	140	30.3
	Infrastructure	–	–	5	1.1
	Transportation and Logistics	–	–	9	2.0
	Not identified	–	–	39	8.5

Source: Derived from the study data. The classification based on Indonesia Stock Exchange (IDX, *n.d.*).

Results

Table 3 shows the demographic characteristics of the 959 participants, including 498 public and 461 private-sector employees. The sample was predominantly female in both sectors. The public sector sample was generally more highly educated, with most respondents holding bachelor's or postgraduate degrees. The private sector showed greater educational diversity, with a substantial proportion of the respondents holding high school or equivalent qualifications alongside bachelor-level degrees. Table 3 reveals that the public sector ($n=498$) is characterized by a highly educated workforce (43.57% holding master's degrees) with significant organizational tenure (48.19% > 10 years). In contrast, the private sector ($n=461$) features a younger demographic, predominantly from the creative and IT subsectors (77.66%).

Most participants in both sectors reported a moderate to long organizational tenure, indicating sufficient exposure to their work environments. Public sector employees tended to have longer tenures, whereas private-sector employees were more concentrated in the three to 10-year range. Public sector participants were primarily employed in central and local government agencies and held primarily functional positions. In contrast, private sector participants included both permanent and contract workers and were drawn from a range of subsectors, particularly the creative industry and information technology. A small proportion of participants (range, 5.4%–8.5%) did not report their agency position, status, or subsectors. However, the missing values did not influence the results of the primary analyses. Overall, the sample reflects adequate demographic diversity and sectoral representation for comparative analysis.

Measurement model

CFA results indicated that all items loaded significantly onto their intended latent constructs in both groups. Standardized factor loadings were generally high, and composite reliability (CR) and average variance extracted (AVE) supported reliability and convergent validity. Table 4 summarizes the standardized loading ranges, CR, and AVE for each construct by group. Before testing the structural

Table 4. Measurement model assessment across public and private sector samples.

Construct	Public Loadings (range)	Public CR	Public AVE	Private Loadings (range)	Private CR	Private AVE
AOC	0.82–0.87	0.95	0.73	0.83–0.88	0.95	0.73
IWB	0.77–0.88	0.95	0.70	0.80–0.92	0.97	0.76
PS	0.52–0.78	0.83	0.50	0.53–0.80	0.84	0.52

Note: AOC=ambidextrous organizational culture; IWB=innovative work behavior; PS=psychological safety; CR=composite reliability; AVE=average variance extracted. All factor loadings are standardized. CR values above.70 and AVE values at or above.50 are typically interpreted as evidence of adequate reliability and convergent validity.

Table 5. Discriminant validity: Fornell-Larcker criterion by sector.

Construct	AOC	IWB	PS
AOC	0.854 / 0.854		
IWB	0.429 / 0.707	0.837 / 0.872	
PS	0.673 / 0.769	0.313 / 0.724	0.707 / 0.721

Source: Derived from the study data.

relationships, the measurement model was evaluated separately for the public and private sector samples. As presented in Table 4, all standardized factor loadings exceeded the recommended threshold of 0.50, composite reliability values ranged from 0.83 to 0.97, and average variance extracted values met or exceeded the recommended criterion of 0.50, indicating satisfactory convergent validity across both groups.

Before testing the structural model, the measurement model was evaluated separately for the public and private sector samples. As shown in Table 4, all standardized factor loadings exceeded the recommended threshold of 0.50, with composite reliability values ranging from 0.83 to 0.97 and AVE values meeting or exceeding the recommended criterion of .50. These findings indicate satisfactory convergent validity and internal consistency across both samples, supporting the measurement model's adequacy.

All items loaded significantly on their intended factors in both sector solutions, with standardized loadings meeting acceptable thresholds throughout ($\beta > 0.40$). As shown in Table 4, no items were deleted from the original scales, no correlated error terms were introduced beyond those specified in the original measurement model, and no cross-loadings exceeding.30 were observed. The CR values ranged from 0.83 to 0.97 across all constructs and sectors, well above the recommended threshold of 0.70, indicating strong internal consistency and reliability. The AVE values met or exceeded the 0.50 benchmark for all constructs in both groups, indicating the achievement of convergent validity. Notably, PS returned the lowest AVE in both sectors (0.50 and.52), just meeting the minimum threshold, with the widest loading range, particularly in the public sector (0.52–0.78). This pattern suggests slightly greater item-level heterogeneity within the PS scale, which aligns with the broader conceptual scope of PS as a construct and the additional measurement complexity introduced by a high power distance context, such as the Indonesian public sector.

Discriminant validity was assessed using the Fornell-Larcker criterion, which requires that the square root of each construct's AVE exceeds its correlations with all other constructs in the model (Fornell & Larcker, 1981). The Inter-construct correlations were derived from the standardized path model, which was estimated separately for each sector. The results are presented in Table 5.

Bold diagonal values represent the square root of AVE for each construct, reported as public sector or private sector. Off-diagonal values are inter-construct correlations derived from the standardized path model and are reported in the public and private sector. The Fornell-Larcker criterion is satisfied when each diagonal value in the corresponding row and column exceeds all off-diagonal values. In the public sector, the Fornell-Larcker criterion was fully satisfied across all construct pairs. Each $\sqrt{\text{AVE}}$ value exceeded its corresponding interconstruct correlations, supporting the empirical distinctiveness of AOC, IWB, and PS in that group. In the private sector, AOC and IWB also satisfied the criteria. However, PS did not fully meet the criterion in the private sector, as its $\sqrt{\text{AVE}}$ (0.721) was marginally exceeded by its correlation with AOC (0.769) and nearly matched by its correlation with IWB (0.724).

This finding indicates transparent acknowledgment is more transparent than dismissal. This result is theoretically interpretable and consistent with the central argument of this study: PS and AOC are more

Table 6. Variable categorization for the public and private sector.

Variable	Sector	Min.	Max	Mean	SD	p	Cohen's d	Category (%)	
								High	Low
IWB	Public	1.33	6.00	4.14	1.03	<0.001	0.77	53.61	46.39
	Private	1.67	6.00	4.91	0.96			55.53	44.47
AOC	Public	2.29	6.00	4.72	0.82	<0.001	0.66	52.81	47.19
	Private	2.57	6.00	5.24	0.76			59.44	40.56
PS	Public	2.20	6.00	4.44	0.78	<0.001	0.41	48.8	51.2
	Private	2.20	6.00	4.77	0.85			54.88	45.12

Source: Derived from the study data.

closely coupled in the private sector, with AOC functioning as a proximal antecedent of PS. The substantially stronger AOC→PS path in the private sector ($\beta = 0.769$) compared to the public sector ($\beta = 0.673$) corroborates this interpretation. Nevertheless, while PS and AOC remain conceptually distinct constructs with different theoretical referents, they are more empirically intertwined in market-competitive environments where cultural signals and safety perceptions are mutually reinforcing. The structural estimates in the private sector model should be interpreted with this limitation in mind. For this situation, supplementing Fornell-Larcker evidence with HTMT ratios computed from item-level correlation matrices provides a more sensitive and conservative test of discriminant validity under conditions of high interconstruct correlation (Henseler et al., 2015).

As shown in Table 6, employees in the private sector reported significantly higher mean scores across all three variables than those in the public sector ($p < 0.001$). Moreover, the observed effect sizes indicate that these differences were not only statistically significant, given the large sample size, but also substantively meaningful, particularly for IWB and AOC. To facilitate interpretation, each variable was categorized into two groups based on its mean score. Scores below the mean were classified as low, whereas those equal to or above the mean were classified as high. This dichotomization was primarily used to enhance the clarity and interpretability of the findings.

Regarding IWB, private sector workers ($M = 4.91$, $SD = 0.96$) reported higher IWB than public sector employees ($M = 4.14$, $SD = 1.03$), with a level of significance ($p < 0.001$), indicating a significant difference in IWB between the two sectors. The sector gap is moderate to large ($d = 0.77$). In practical terms, private-sector employees are significantly higher on IWB, which is consistent with the larger proportion of private-sector employees classified as 'High'. This magnitude indicates that the sector context is likely associated with materially different innovation-related expectations, incentives, or workflow autonomy.

For AOC, the private sector workers ($M = 5.24$, $SD = 0.76$) reported a higher perception of AOC in their organization than the public sector employees ($M = 4.72$, $SD = 0.82$), with a level of significance ($p < 0.001$). The difference is moderate ($d = 0.66$), implying that the private sector has a noticeable advantage in balancing exploration (experimentation/innovation) with exploitation (execution/efficiency). This pattern aligns with organizations that simultaneously institutionalize flexibility and performance routines more strongly.

Significant differences were also found in the PS of private sector workers ($M = 4.77$, $SD = 0.85$), which was higher than that of the public sector ($M = 4.44$, $SD = 0.78$) with a level of significance ($p < 0.001$), and the difference is small-to-moderate ($d = 0.41$). This implies that private-sector employees score higher, but the gap is less pronounced than for the other constructs. This indicates that PS may be shaped more by proximate factors than by sector alone, even though the sector still shows a meaningful association.

Structural model fit and analytical validity

Before hypothesis testing, the suitability of the proposed mediation model was assessed using SEM. As shown in Table 7, the goodness-of-fit indices indicate that the theorized SEM of mediation analysis demonstrates a strong and acceptable fit to the data for the entire population, as well as for both public and private subgroups. The model achieves an excellent fit for the entire population, as shown by a CFI of 0.986 and a TLI of 0.984, both of which significantly meet the standard threshold of 0.95 for

Table 7. Goodness of fit of the models.

Index	RMSEA	SRMR	CFI	TLI	Chi-square	df
Entire Population	0.070	0.028	0.986	0.984	1014.826	183
Public	0.080	0.046	0.973	0.970	794.508	185
Private	0.076	0.033	0.982	0.980	681.22	185

Source: Derived from the study data.

Table 8. Direct effects of AOC, PS, and IWB across public and private sector.

Sector	Outcome	Predictor	β	SE	95% CI lower	95% CI upper	z	p
Public	IWB	PS	0.151	0.021	0.131	0.172	7.03	<0.001
Public	IWB	AOC	0.330	0.016	0.314	0.346	17.66	<0.001
Public	PS	AOC	0.655	0.012	0.643	0.667	46.94	<0.001
Private	IWB	PS	0.413	0.050	0.363	0.463	8.23	<0.001
Private	IWB	AOC	0.405	0.047	0.358	0.452	8.643	<0.001
Private	PS	AOC	0.769	0.021	0.748	0.790	37.437	<0.001

Source: Derived from the study data.

exemplary fit. This is supported by the SRMR value of 0.028, which is well below the cutoff of 0.05, indicating a negligible average discrepancy between the observed correlations and those predicted by the model.

The RMSEA value of 0.07 falls within the 'acceptable' fit range (0.05–0.08), confirming that the model would reasonably approximate the population covariance matrix. The chi-square coefficient is also significant, which is expected given the large sample size typically involved in such analyses. Therefore, given the strength of the other indices, it is not a cause for concern. The robustness of these fit indices confirms that the hypothesized relationships among AOC, PS, and IWB are statistically sound and suitable for subsequent mediation and multi-group analyses.

Research objective 1: the direct impact of AOC and PS on IWB within the Indonesian workforce

The first research objective was to determine whether AOC directly predicts IWB (H1a). Table 8 shows that AOC positively and significantly predicted IWB in both the public ($\beta = 0.330$, $p < 0.001$) and private sector ($\beta = 0.405$, $p < 0.001$). The stronger effect observed in the private sector indicate that AOC has a more pronounced influence on IWB in market-driven organizational settings. Therefore, H1a was supported. AOC significantly predicted PS in both sectors, indicating that organizational cultures that effectively balance exploration and exploitation foster greater PS among employees. The relationship was significant in the public sector ($\beta = 0.655$, $p < 0.001$) and even stronger in the private sector ($\beta = 0.769$, $p < 0.001$), suggesting that the AOC practices of private organizations are more closely associated with perceptions of interpersonal trust, openness, and risk tolerance.

Consistent with H1b, PS positively predicted IWB in both sectors. However, the strength of this relationship differed markedly across contexts. In the public sector, PS had a significant but relatively modest effect on IWB ($\beta = 0.151$, $p < 0.001$), whereas in the private sector it emerged as a substantially stronger predictor ($\beta = 0.413$, $p < 0.001$). These findings indicate that AOC not only serves as a direct antecedent of IWB but also creates conditions that enhance PS, thereby facilitating IWB. The stronger AOC–PS and PS–IWB relationships observed in the private sector indicate that PS plays a more central role in translating supportive cultural conditions into IWB in market-oriented environments. Therefore, H1b was supported in both sectors, although the magnitude of the effect was contingent on institutional context.

Research objective 2: mediation role of psychological safety

H2 proposed that PS mediates the relationship between AOC and IWB. The mediation analyses shown in Table 9 support this hypothesis across both sectors. As presented in Table 9, AOC exerted a significant indirect effect on IWB through PS in the public sector ($\beta = 0.099$, $p < 0.001$), indicating that PS partially explains how AOC translates into IWB. A similar but considerably stronger pattern emerged in the private sector, where the indirect effect was more than three times larger ($\beta = 0.336$, $p < 0.001$). These

Table 9. Indirect effects of AOC on IWB through PS.

Sector	Indirect path	β	SE	95% CI lower	95% CI upper	z	p
Public	AOC $\rightarrow$ PS $\rightarrow$ IWB	0.099	0.012	0.087	0.111	7.182	<0.001
Private	AOC $\rightarrow$ PS $\rightarrow$ IWB	0.336	0.020	0.316	0.356	15.614	<0.001

Source: Derived from the study data.

Table 10. Total effects of AOC on IWB.

Sector	Direct effect	Indirect effect	Total effect
Public	0.330	0.099	0.429
Private	0.405	0.336	0.741

Source: Derived from the study data.

Table 11. Results of the multigroup analysis.

Model	χ^2	df	χ^2/df	$\Delta\chi^2$	TLI	CFI	RMSEA	SRMR
Unconstrained Model	1780	372	4.78	–	0.991	0.992	0.089	0.055
Loading Constraint	2134	390	5.47	354; 18 ($p < 0.05$)	0.990	0.991	0.097	0.059
Intercept Constraint	1976	471	4.20	196; 99 ($p < 0.05$)	0.993	0.992	0.082	0.055
Residual Constraint	2134	387	5.51	354; 15 ($p < 0.05$)	0.99	0.991	0.097	0.059
Mean Structure	2134	390	5.47	354; 18 ($p < 0.05$)	0.99	0.991	0.097	0.059

Source: Derived from the study data.

findings indicate that while PS functions as an important explanatory mechanism in both contexts, its private sector role in converting cultural support into IWB is substantially more pronounced.

Analysis of the total effects shown in Table 10 indicated notable sectoral differences in the mechanisms through which AOC promotes IWB. While AOC exerted both direct and indirect influences on IWB in both sectors, its overall impact was substantially stronger in the private sector (0.741) than in the public sector (0.429). This difference was primarily attributable to the larger indirect effect observed in the private sector (0.336 vs. 0.099), indicating that PS serves as a more influential mechanism for converting cultural support into IWB. In contrast, the public sector relied more heavily on the direct effect of AOC on IWB, indicating a less pronounced mediating role of PS.

Overall, these results support Hypothesis H2, demonstrating that PS significantly mediates the relationship between AOC and IWB in both sectors, with differences in the magnitude of the mediation effect across groups. These findings extend existing theory by demonstrating that while PS is a valid mediating mechanism across sectors, its explanatory strength depends on the institutional context. AOC provides a necessary foundation for IWB in public and private organizations. However, its translation into IWB is far more psychologically driven in private sector settings, whereas in public sector organizations, its cultural effects remain more direct and less fully channeled through PS.

Research objective 3: analysis of multigroup and structural differences

Research objective 3 investigated the sectoral differences in the AOC–PS–IWB model. Multigroup SEM analysis in Table 11 indicated that the structural relationships differed significantly although factor structures across sectors were comparable. The effect of PS on IWB was substantially stronger in the private sector, resulting in a considerably larger indirect effect of AOC on IWB through PS. Conversely, the public sector exhibited greater dependence on the direct influence of AOC on IWB. These findings support H3a–H3c and indicate that PS is a more salient mechanism through which organizational culture fosters innovation in private than in public organizations.

Table 11 also showed that path-specific invariance tests revealed that sectoral differences were concentrated in the PS toward IWB relationship. Although the effects of AOC on PS and IWB were statistically equivalent across sectors, the effect of PS on IWB differed significantly ($\Delta\chi^2 = 11.527$, $p < 0.001$). Specifically, PS strongly predicted IWB in the private sector ($\beta = 0.413$, $p < 0.001$) but was unrelated to innovation in the public sector ($\beta = 0.045$, $p = 0.471$). These results indicate that sectoral variation in the AOC–IWB relationship is primarily driven by differences in the effectiveness of PS as a mechanism for converting supportive cultural conditions into IWB.

Although the chi-square difference tests were statistically significant, changes in comparative fit indices across increasingly constrained models remained minimal ($\Delta\text{CFI} \leq 0.001$), supporting measurement invariance across sectors. Given the large sample size, ΔCFI was considered a more robust criterion than $\Delta\chi^2$ for evaluating invariance (Chen, 2007; Cheung & Rensvold, 2002). These findings indicate that the constructs were interpreted similarly across groups, thereby justifying subsequent structural relationship comparisons. Configural, metric, scalar, residual, and mean invariance were supported, indicating that meaningful comparisons of structural relationships between public and private sector employees could be conducted.

Discussion

Ambidextrous organizational culture and psychological safety as enablers of innovative work behavior

The findings provide a coherent explanation of how the joint effects of AOC and PS enable IWB. Consistent with the view of IWB as a multistage process encompassing idea generation, promotion, and implementation (Janssen, 2000), AOC legitimizes both exploration and exploitation through a cultural logic. By simultaneously encouraging experimentation and disciplined execution, AOC supports innovation across its entire lifecycle rather than being limited to ideation alone (Kandath & Shekhar, 2025). Grounded in organizational ambidexterity theory, AOC reflects an organization's capacity to balance flexibility and efficiency in ways that sustain innovation processes (Wang & Rafiq, 2014). The results extend this view by showing that AOC has a significant direct effect on IWB in both public and private sectors, indicating that it operates as a stable cultural foundation for IWB even under institutional constraints.

In public organizations, where formalization and accountability pressures often restrict discretionary behavior (Bozeman, 2000), AOC function as a legitimizing signal that frames innovation as an acceptable and institutionally supported activity (Bysted & Jespersen, 2014). Beyond this direct effect, the findings clarify the interpersonal mechanism by which AOC is translated into IWB. AOC is strongly associated with PS, indicating that cultural support for ambidexterity shapes not only task-related expectations but also employees' perceptions of interpersonal risk. PS – defined as the belief that speaking up, experimenting, and making mistakes will not result in social sanctions (Carmeli et al., 2010; Edmondson, 1999) emerges as a critical psychological condition for innovation. When the AOC communicates that both experimentation and execution are valued, employees are more likely to interpret risk-taking as legitimate rather than deviant. This reduces perceived interpersonal threat and increases the willingness to engage in IWB.

This mechanism is consistent with SET, which posits that discretionary effort reciprocates favorable organizational treatment (Blau, 1964; Cropanzano & Mitchell, 2005). In this context, employees not only behaviorally but also through psychological alignment, which facilitates innovation, reciprocate perceived cultural support. PS becomes particularly salient in innovation contexts characterized by uncertainty and potential failure (Edmondson & Lei, 2014). Unlike trust, which concerns expectations of others' intentions, PS captures whether negative interpersonal consequences make individuals feel safe when engaging in risk-taking. Given that innovation inherently involves ambiguity, evaluation uncertainty, and possible failure (Barron & Harrington, 1981; Feist, 1998), employees are unlikely to engage in IWB unless such psychological barriers are reduced. Therefore, AOC influences IWB not only through structural or cultural enablement but also through shaping the subjective safety experience of employees. When experimentation, dissenting views, and mistakes are normalized within the culture, employees are more willing to convert ideas into action despite inherent risks.

Psychological safety as a mediating mechanism

The mediation analyses strongly support PS as a key mechanism linking AOC to IWB. Rather than operating solely through direct cultural influence, AOC exerts part of its effect by shaping employees' perceptions of interpersonal risk. This finding advances innovation research by clarifying *the translation of* AOC and PS into individual behavior. Previous studies have emphasized the exploration of AOC and PS at the

organizational or team level of analysis (Edmondson, 1999; Zhang et al., 2023). Therefore, this study provides a different perspective because AOC and PS are measured from individual perceptions to analyze their influence on IWB.

The presence of a significant mediation effect in both sectors supports the core premise of SET: when employees perceive socio-emotional support, they reciprocate supportive organizational conditions with discretionary contributions (Blau, 1964). However, the magnitude of this mediation differs substantially across sectors. The indirect effect is small in the public sector, indicating that PS facilitates innovation primarily through idea expression rather than through implementation. Structural constraints limit the extent to which PS can be transformed into innovation. In contrast, the private sector mediation effect indicates a tighter relationship between PS and IWB. Feeling psychologically safe is more likely to translate directly into innovative action in market-oriented environments characterized by greater autonomy and faster decision cycles. This pattern is consistent with previous work showing that PS amplifies learning, experimentation, and coordinated execution in competitive contexts (Carmeli et al., 2010; Edmondson & Lei, 2014).

While AOC influences IWB through both direct and indirect pathways in both sectors, the private sector relies far more heavily on the psychologically mediated route. This indicates that interpersonal conditions more strongly drive innovation in private organizations, whereas innovation remains more directly anchored in cultural legitimacy and formal endorsement (Bysted & Jespersen, 2014). The exploration and exploitation of both, that former AOC, are essential for any organization to excel and require (Priyanka et al., 2022). These findings extend AOC and PS research by demonstrating that mediation mechanisms are context-dependent. PS is a valid explanatory mechanism across sectors, but institutional arrangements that enable or constrain individual action shape its relative importance.

Sectoral differences in the AOC–PS–IWB relationship

The multigroup analysis confirms that the institutional context acts as a boundary condition shaping the relationships among the AOC, PS, and IWB. Private organizations are more ambidextrous, innovative, and provide more benefits than the public sector. This result supports the findings of Priyanka et al. (2022). Establishing configural invariance indicates that employees across sectors conceptualize constructs similarly, justifying structural comparisons. The lack of full metric and scalar invariance indicates that the salience of the constructs differs across contexts, which is a theoretically meaningful result rather than a methodological weakness. The stronger PS toward the IWB pathway in the private sector reflects institutional logics that reward initiative, speed, and adaptability. PS is positively associated with risk-taking behaviors that are closely related to performance outcomes in such environments. When combined with AOC signals, PS becomes an effective conduit for cultural intent transformation.

The structural relationships among AOC, PS, and IWB differ between the public and private sectors, with a particular emphasis on whether the PS has a stronger mediating role in the private sector. This pattern indicates that PS functions as a meaningful statistical predictor of IWB in the private sector but not in the public sector. This is consistent with the theoretical argument that bureaucratic formalization in public institutions structurally dampens the behavioral translation of felt safety into innovative action. These findings refine rather than contradict H3: the full mediation pathway is not uniformly stronger in the private sector, but the institutional context exerts its most consequential moderating influence on the link between PS and IWB. In contrast, the path from AOC to PS operates at a statistically comparable magnitude across both sectors. This indicates that AOC generates PS at a similar rate regardless of the institutional setting, even if the downstream behavioral consequence of that safety diverges sharply between sectors.

The effect of PS on IWB differs across sectors. PS has a significant but modest effect on IWB in the public sector, indicating that PS alone is insufficient to overcome structural constraints such as limited discretion, rigid procedures, and hierarchical authority. PS may facilitate voice and idea sharing, but formal rules often constrict its implementation. It has been argued that innovation and bureaucracies contradict each other (Vigoda-Gadot et al., 2005). Public sector innovation may be closely related to the overall modernization of public organizations (Bysted & Jespersen, 2014; Neo et al., 2023). The PS's weaker mediating role in the public sector reflects the bureaucratic system's structural realities. Formal

rules, hierarchical authority, and accountability mechanisms increase the perceived failure cost and limit discretion. PS may encourage voice and learning; however, it does not necessarily provide the authority or resources needed for implementation. Consequently, innovation in public organizations remains more dependent on cultural endorsement and institutional legitimacy than on interpersonal climate alone (Kousina & Voudouris, 2023). Innovation in the public sector has been conceptualized as a normative good (Osborne & Brown, 2011), and the public sector may perceive normative expectations to innovate.

In the Indonesian public sector, adaptive values have only recently been institutionalized as part of ongoing public sector reform, as initiatives aimed at enhancing service quality, responsiveness, and innovation since 2021 (Fachri & Nanda, 2024). However, public organizations have historically been characterized by bureaucratic procedures, hierarchical authority, centralized decision-making, and a strong emphasis on compliance and administrative control. These deeply embedded institutional arrangements have traditionally prioritized stability, predictability, and procedural correctness over experimentation and risk-taking. Consequently, the shift toward adaptability and innovation represents a recent cultural transformation that may require considerable time to become fully embedded in employees' day-to-day work practices. Despite the AOC context, exploitation is still the focus in the public sector, so it takes time to balance it.

In contrast, in private organizations, where market competition often motivates innovation, the need to meet increasing public demands and deliver greater social value largely drives public sector innovation. However, this imperative often collides with bureaucratic structures characterized by formalized procedures, centralized decision-making, and hierarchical control, all of which can inhibit employees' willingness and ability to engage in IWB (Vigoda-Gadot et al., 2005). In private organizations, where autonomy, performance incentives, and competitive pressures are more important, performance rewards emerge as a powerful catalyst for transforming ideas into action. This sectoral difference highlights that IWB depends not only on the interpersonal climate but also on the structural latitude to act. These findings are theoretically consistent from the SET perspective.

AOC represents a high-value organizational resource signaling that innovation is valued, while PS lowers the interpersonal costs of reciprocating through risky, discretionary behavior (Blau, 1964; Cropanzano & Mitchell, 2005). Together, they explain why employees are willing to invest effort in innovation that goes beyond formal role requirements. The stronger PS toward the IWB relationship and the mediation effect in the private sector indicate that market-oriented environments are more psychologically mediated. Employees are more sensitive to interpersonal risk under performance pressure, competition, and high accountability, making PS a critical condition for discretionary IWB (Baer & Frese, 2003; Edmondson & Lei, 2014). Consistent with SET, employees reciprocate perceived cultural support with innovative effort only when they feel safe to take interpersonal risks (Blau, 1964; Cropanzano & Mitchell, 2005). In contrast, weaker mediation in the public sector suggests that cultural and institutional directives may more directly shape IWB, with PS playing a less central role due to higher procedural formalization and clearer role expectations (Bozeman, 2000; Bysted & Jespersen, 2014).

This transitional context may help explain why AOC demonstrates a significant relationship with IWB, albeit weaker than that observed in the private sector. While public organizations are increasingly promoting adaptive and innovation-supportive values, employees may still operate within structures and routines that constrain autonomy, discourage deviation from established procedures, and reinforce risk-averse behaviors. As innovation inherently involves uncertainty, experimentation, and the possibility of failure, when bureaucratic norms continue to emphasize the importance of compliance and error avoidance, employees may be reluctant to engage in IWB. Therefore, although AOC signals the importance of IWB, traditional public-sector structures and compliance-oriented norms continue to reinforce risk aversion and procedural conformity, thereby weakening employees' propensity to engage in IWB. In other words, the cultural message encouraging innovation may not yet be fully aligned with the organizational systems and practices that employees encounter in their daily work, which limits the extent to which innovative values are translated into innovative actions.

These results also qualify the application of SET. While SET predicts reciprocity in response to supportive conditions, institutional opportunity structures determine the ability to reciprocate through innovation. In private organizations, IWB reciprocity is more feasible; however, it may be constrained even when PS is high in public organizations. Overall, the findings caution against treating PS as a universally

dominant innovation mechanism. While it remains important across contexts, its effectiveness depends on its alignment with cultural signals and structural conditions. The AOC provides the normative foundation for IWB, but the PS translates this foundation into action only when institutional conditions permit.

Implications, limitations, and future research directions

Implications

This study contributes to the IWB literature in four important ways. First, by identifying PS as a key mediating process linking AOC to IWB, it advances the understanding of the mechanisms through which organizational culture fosters employee innovation. Although prior studies have independently linked organizational culture, PS, and innovation, limited research has integrated these constructs within a single explanatory framework. Drawing on SET, this study explains how a culture that simultaneously supports exploration and exploitation can foster employees' perceptions of PS, which subsequently encourages IWB.

Second, this study extends the literature on AOC by demonstrating that its influence on IWB is context-dependent and operates through employees' perceptions of PS. These findings advance the understanding of employee innovation by demonstrating that AOC alone is insufficient to promote IWB. Instead, its effectiveness depends on institutional context and employees' PS, underscoring the importance of contextualizing organizational culture theories across different sectors while informing sector-specific Human Resources practices.

Third, this study extends the literature by examining whether these relationships vary across institutional contexts. Public and private organizations operate under different structural conditions, accountability systems, performance expectations, and risk orientations, which may shape the translation of organizational culture into IWB. This distinction is particularly relevant in the Indonesian context given the implementation of the BerAKHLAK core values framework in the public sector, which explicitly promotes innovation while maintaining strong bureaucratic controls. Consequently, the extent to which PS functions as a mechanism connecting AOC and IWB may differ across sector.

Finally, this study contributes evidence from Indonesia, an emerging economy that remains underrepresented in organizational behavior research. By examining the AOC–PS–IWB relationship outside the predominantly Western contexts in which these theories were developed, the study provides a more context-sensitive understanding of employee innovation and offers practical insights for designing sector-specific Human Resource strategies that foster sustainable innovation.

From a practical implication, these findings imply that innovation interventions should be context-sensitive. Strengthening AOC is beneficial across sectors; however, enhancing PS is likely to generate greater marginal returns in private organizations, where behavioral expression of innovation is more contingent on the organization's psychological aspects. Accordingly, private-sector Human Resources strategies should emphasize autonomy, cross-functional collaboration, agile work design, and reward systems that reinforce experimentation. In contrast, public-sector organizations may need to prioritize leadership development, participative communication, and trust-building mechanisms to compensate for structural rigidity and enhance employees' willingness to voice ideas. Overall, the findings underscore that AOC and PS jointly matter for IWB, but their relative influence systematically varies across institutional contexts. This supports a shift toward more context-sensitive models of innovation behavior that explicitly account for sectoral differences in explaining how organizational culture translates into employee innovation.

Limitations

Several limitations should be acknowledged. First, the cross-sectional design precludes causal inference, leaving open the possibility of reciprocal relationships whereby employees who engage in IWB may subsequently report higher levels of AOC and PS (Podsakoff et al., 2003). Second, the exclusive reliance on self-reported data raises concerns of common method bias, although the use of SEM partially mitigates this issue. Future research should incorporate multi-source or objective innovation indicators (e.g. supervisor ratings or performance records). Third, although configural invariance was established, full measurement invariance across sectors was not supported, indicating potential differences in how public versus

private contexts interpret PS and IWB. Accordingly, sectoral comparisons of effect sizes should be interpreted with caution (Cheung & Rensvold, 2002; Vandenberg & Lance, 2000). Finally, the study's focus on Indonesia enhances contextual relevance but limits external generalizability to institutional environments with different governance structures and cultural configurations.

Future research directions

Future research could extend this work in several important ways. Longitudinal and experience-sampling designs would help clarify the temporal sequencing between AOC, PS, and IWB. Experimental or intervention-based studies could also explore the link between deliberately enhancing AOC or PS and sustained increases in IWB. Given PS's weaker mediating role in the public sector, future studies should explore alternative or complementary mediators, such as perceived procedural justice, rule flexibility, or leadership empowerment, which may be more influential in bureaucratic environments. Multilevel designs that incorporate organizational policies and leadership behaviors would further enhance the understanding of cross-level influences. Cross-national comparative studies would also be valuable in determining whether the observed sectoral patterns are specific to Indonesia or reflect broader dynamics in emerging economies.

Conclusion

This study advances a context-sensitive explanation of IWB by demonstrating that PS does not operate with an equivalent behavioral force across institutional settings. AOC may foster conditions that support innovation in both public and private organizations. The translation of PS into innovative action appears to depend on the surrounding institutional context. Therefore, the findings refine the social exchange theory by suggesting that reciprocity through IWB requires not only willingness but also sufficient organizational opportunity to act.

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Ethical approval

This study was reviewed and approved by the Research Ethics Committee of the Faculty of Psychology, Universitas Indonesia, with registration number 169/FPsi. Komite Ethics/PDP.04.00/2024. All participants provided written informed consent before participation.

Author contributions

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Data availability statement

The data supporting the findings of this study are available upon reasonable request from the corresponding author, AE. Data are not publicly available due to ethical restrictions. The Research Ethics Committee approved the conditions of informed consent.

AI declaration

During the preparation of this manuscript, the authors used a generative AI called Trinkka (www.trinka.ai) for language editing and structural assistance. The authors reviewed and edited all content and took full responsibility for the manuscript.

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