Idea rejection and subsequent innovation intention in Chinese small and medium-sized enterprises: A social cognitive theory perspective

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ARTICLE INFO

ABSTRACT

Employees' creative ideas are internal resources that may enable organisations to adapt to external change, create competitive advantage, and develop growth opportunities. Managerial rejection of innovative ideas is a significant challenge that may diminish employee motivation and willingness to contribute ideas. We surveyed 336 employees from research and development and technology departments to investigate the relationship among idea rejection (IR), creative self-efficacy (CSE), and subsequent innovation intention (SII). The findings reveal that IR significantly decreased employees' motivation to innovate; moreover, CSE mediated the relationship between IR and SII. Finally, quality managerial feedback may moderate this relationship and enhance self-efficacy's positive effects on innovation. These results highlight effective managerial feedback's importance in mitigating IR's negative consequences and fostering a culture of innovation. Organisations are encouraged to implement practices that enhance feedback mechanisms and support CSE to align employee innovation with organisational objectives.

Introduction

Innovation involves introducing novel ideas, methods, or technologies that enhance organisational performance. Within organisations, this process emphasises the development of creative solutions to improve efficiency and secure competitive advantage (Anderson *et al.*, 2014). Employee-initiated innovation may encounter organisational resistance owing to resource limitations, stringent evaluations, and managerial decision-making bias (Mueller *et al.*, 2012). These rejections may precipitate frustration and disengagement, discouraging future innovative endeavour. Research exploring how organisations can sustain innovator motivation following rejection is of strategic importance to business and industry.

Research has revealed that idea rejection (IR) yields complex effects on ongoing innovation (Diwas *et al.*, 2013; King, 2019). Individuals may exhibit heightened creativity in the aftermath of rejection (Amabile, 1983; Zhou, 1998). Current theories propose that while rejection diminishes self-efficacy and may curtail creativity (Vangelisti, 2001; Richman & Leary, 2009), it can also enhance communication and align organisational objectives to stimulate innovation (Diwas *et al.*, 2013; Fernandez-Mateo & Coh, 2015). Employee-related factors, such as

personality traits and motivation, have been studied to explore these contradictions. Notably, an area that has received limited attention is how managers communicate rejection and the influence of rejection on future innovation.

Our study examines how developmental feedback during rejection mitigates negative impacts. Supervisor developmental feedback (SDF) refers to information and constructive guidance provided by supervisors, which supports employee growth even while supervisors are rejecting their ideas (Zhou, 2003; Su *et al.*, 2019). According to social cognitive theory, elucidating the reasons for rejection aids employee understanding of company strategies, can maintain confidence, and help align thinking with organisational goals. This feedback should be more than an evaluation of ideas by conveying that the company values employee development. Research has suggested that SDF enhances innovation implementation (Axtell *et al.*, 2000), creative performance (Madjar *et al.*, 2002), and proactive behaviour (Ohly *et al.*, 2006); however, its role in the context of rejection remains under-explored.

Our study proposes a framework connecting IR, creative self-efficacy (CSE), and SDF to predict subsequent innovation intention (SII). We focus on small and medium-sized enterprises (SMEs) in China, where a national innovation-driven development strategy has incentivised firms

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to encourage employee innovation. Further, SMEs are better positioned to leverage employee-generated innovative ideas as the costs associated with soliciting and implementing employee suggestions are generally lower in SMEs. Larger firms typically incur higher organisational costs when implementing individual-level innovative initiatives because of bureaucratic inertia and structural complexities. This dynamic renders large enterprises a less ideal setting for our study. Moreover, SMEs generally lack formalised mechanisms for handling employee creativity, relying on managerial governance styles to cultivate innovation. Within these enterprises, the evaluation and adoption of creative ideas usually depend on subjective managerial judgment (Vagnani & Volpe, 2017; Boudier et al., 2023; Greul et al., 2023), thus fostering a research context that aligns closely with our theoretical framework.

Based on data collected from 324 Chinese SME employees and subsequent analysis, we offer the following three key contributions: First, our study extends beyond traditional innovation studies, which predominantly focus on idea generation. We reveal how frequently IR inhibits ongoing innovation motivation and offer perspectives on addressing the challenge of sustaining organisational innovation. Second, we provide a novel theoretical interpretation of CSE, regarding it as dynamically malleable in failure contexts rather than a stable trait, which expands social cognitive theory's explanatory scope in the innovation domain. Third, our study empirically examines supervisors' role in employees' cognitive reframing processes. By providing developmental feedback, supervisors can help employees reframe their experiences of failure, reduce confidence loss, and introduce new strategies to maintain employee motivation to innovate. The remainder of this paper is organised as follows: Section 2 articulates theoretical foundations and hypotheses development. Section 3 details the methodology. Sections 4 and 5 present the empirical results. Finally, Section 6 discusses the findings and possible future research directions.

Literature review and hypothesised framework

Social cognition theory

Social cognitive theory (SCT), proposed by Bandura (1986), seeks to explain how human behaviour emerges and can be reinforced. The theory suggests that, rather than passively reacting to stimuli, individuals actively observe, interpret, and self-regulate their actions. Bandura (1986) highlighted self-efficacy—the belief in one's capability to set goals, monitor progress, and adapt accordingly—as the key driver of this process (Ng & Lucianetti, 2016; Tierney & Farmer, 2002). Moreover, SCT has offered a distinctive lens within innovation research to explain why employees' innovative behaviours differ (Bandura, 1977, 1997). The theory extends beyond trait perspectives that emphasise stable personality differences (Peng et al., 2023) and motivational theories that foreground organisational reward systems (Mueller et al., 2012). Instead, SCT argues that innovation hinges on how individuals cognitively interpret and self-regulate their responses to the opportunities and constraints embedded in their work contexts (Khan et al., 2023). Employees possessing strong self-efficacy beliefs are more likely to initiate and persist in innovative efforts.

Drawing on SCT, employee interpretation of IR—not the rejection itself—determines their subsequent behaviour. Framing rejection as a definitive verdict rooted in personal inadequacy (Shalley et al., 2004; Lee et al., 2021) erodes CSE and diminishes innovation persistence (Singh et al., 2015). Conversely, recasting rejection as diagnostic, external, and being amenable to change fosters adaptive learning and renewed effort (Bakker & de Vries, 2021). Managers can actively shape these appraisals by attributing rejection to situational or modifiable factors, thereby sustaining engagement in the innovation process (Destobbeleir et al., 2011; Hoeveler et al., 2018; Kim & Kim, 2020). From an SCT perspective, managers' developmental feedback may moderate employee cognitive appraisal processes, clarifying the conditions under which rejection fuels, rather than stifles, future innovation.

IR and SII

Notably, IR occurs when managers dismiss or defer employees' innovative proposals (Piezunka & Dahlander, 2019). According to SCT, IR is a negative external stimulus that shapes subsequent behaviours (Ng et al., 2022). When employees experience rejection, they may experience heightened risk aversion towards future innovative proposals because of wasted time and effort (Zhao et al., 2023; Halbesleben et al., 2014). Typically, negative rejection erodes employee confidence, diminishing creative capabilities and willingness to engage in future innovation (Howe & Dweck, 2016). Repeated rejection amplifies employee sensitivity to failure, prompting safer, more conservative strategies and, in extreme cases, complete withdrawal from breakthrough efforts (Hareli & Rafaeli, 2008). Thus, we propose the following hypothesis.

H1. IR is negatively associated with SII.

Mediating role of employees' CSE

Defined as an individual's belief in their capability to generate creative outcomes, CSE reflects a core aspect of self-concept that supports creative engagement and innovative performance (Mumford & Gustafson, 1988; Bandura, 1999). According to SCT, self-efficacy stems from the following three sources: mastery experiences, social persuasion, and emotional regulation (Bandura, 1977). First, individuals gain confidence through successful experiences. When creative ideas are rejected, employees lose the chance to assess their value and understand the organisation's standards for innovation; consequently, identifying successful outcomes or effectively directing efforts becomes difficult for employees (George et al., 2023). Second, IR frequently signals disapproval, resulting in attributional bias. Employees may blame internal deficiencies, thinking 'I lack innovative capability', instead of considering external factors, such as resource allocation or situational challenges. Social persuasion refers to how evaluations by others can affect an individual's perceived capability (Bandura, 1977). When a manager rejects creative ideas, this negative feedback reduces social persuasion's motivational impact and heightens self-doubt. Employees may equate managerial disapproval with personal incompetence. Moreover, rejection can produce negative emotions, such as anxiety and frustration, which may impair task efficacy self-assessment (Shepherd & Cardon, 2009; Redmond, 2018). Continuous rejection can foster emotional exhaustion, shifting employees' focus from creatively solving problems to avoiding risk (Lent, 1994). When subjected to rejection, employees generally experience decreased self-efficacy and pursue safe ideas that involve low risk and limited innovation. Thus, we propose the following hypothesis.

H2. IR is negatively correlated with CSE.

CSE is a cognitive bridge between IR and SII (Ng et al., 2022). Employees become more confident in their innovative abilities and value their ideas when their contributions are accepted, demonstrating stronger intrinsic motivation for idea generation. This confidence results in greater perseverance in subsequent innovation. When ideas are rejected, employees experience less CSE and tend to hesitate and avoid investing in high-risk innovation projects. Research has indicated that CSE positively correlates with the generation of novel ideas (Bandura, 2001, 2012). Moreover, studies have reported a positive effect on SII (Gong et al., 2009; Liao et al., 2010; Tierney & Farmer, 2011). Therefore, we argue that IR undermines employees' willingness to propose novel ideas by dismissing their CSE. Thus, we propose the following hypothesis.

H3. IR negatively affects employees' SII through CSE's mediating role.

SDF's moderating effect

SDF refers to constructive suggestions or explanations provided by

managers when rejecting employee ideas. This support seeks to enhance learning, improve performance, and foster career development (Zhou, 2003). When IR occurs without constructive support, it can be perceived as evidence of personal incompetence. Managerial decision-making in relation to innovative change is usually focused on technical (i.e., strategic alignment and resource availability) or implementation (i.e., internal capabilities and market demand) feasibility (Kannan-Narasimhan & Lawrence, 2018). By explicitly communicating these factors, managers may be able to reframe employee attributions and mitigate rejection's self-deflating effects.

We propose that SDF mitigates IR's negative consequences for two primary reasons. First, when managers explicitly attribute the rejection to a lack of alignment with organisational strategy or resources, such as technological incompatibility or competing priorities, it helps restore employee self-efficacy and provides guidance for strategic adaptation (Shin & Grant, 2021; Soderberg et al., 2015). Second, explaining that the rejection stems from external constraints, such as budget shortages or unfavourable timing, may help prevent employee attributions of incompetence, thereby encouraging the re-evaluation of their proposals within the organisational context.

The communication of the reasons for rejection allows managers opportunities to reduce employees' negative self-assessment of CSE (Bandura, 1997). Additionally, it provides an opportunity to reframe the rejection into actionable improvement goals, enabling employees to interpret failure more rationally, establish feasible targets, and sustain innovative motivation (Benedek et al., 2023; Schütmaat et al., 2023; Van Erkelens et al., 2024). Based on this understanding, we propose the following hypotheses:

H4. SDF significantly moderates the relationship between IR and employee CSE.

H5. CSE's mediating effect on the relationship between IR and SII is moderated by SDF.

Drawing on existing research and the formulated hypotheses, this study introduces the proposed research framework, as illustrated in Fig. 1.

Methodology

Sampling and data collection

This study targeted SMEs located in Guangdong, Zhejiang, and Shanghai. These regions are recognised as leading innovation hubs in China and are consistently ranked among the top performers in national innovation assessments (MOST, 2024). These regions host a high concentration of technology-oriented SMEs, creating an environment wherein creative idea generation and evaluation frequently occur. Within the selected organisations, employees from R&D and technical departments were the target participants. These employees would be

directly involved in idea generation, refinement, and technical problem-solving, making this group the most likely to experience IR. The sampling strategy ensured that the collected data reflected the dynamics of interest in this study and established a strong coherence between the research context and its objectives.

To obtain a representative sample, we utilised social networks to connect with the HR and administrative departments of the target firms. Alumni and acquaintances of HR managers facilitated access by providing departmental contacts. Before distributing questionnaires, we explained the study's objectives, highlighted confidentiality measures, and assured participants that individual-level data would remain within the research team. Participation was voluntary, and respondents were informed of their right to withdraw at any time. To ensure confidentiality, each questionnaire was accompanied by an empty envelope for the return of completed responses.

We employed a mixed-method approach, combining online and offline data collection. Online surveys were conducted through *Wenjuanxing* (https://www.wjx.cn), a widely recognised survey platform in China, which has been frequently used in organisational research (Ning et al., 2020; Gao et al., 2024; Kong et al., 2024; Peng et al., 2025). Access was restricted to R&D employees, with safeguards against duplicate submissions by limiting responses per IP and device. Responses completed in less than eight minutes, those with uniform answer patterns, or those failing attention-check questions were excluded. The offline survey was administered in collaboration with three technology-oriented SMEs in Guangzhou: The National High-performance Polymer Innovation Center, Guangzhou Double Bioproduct Co., Ltd., and Guangzhou Radio & Television Zhongda Digital Technology Co., Ltd. These firms are noted for a high R&D intensity, strong innovation culture, and for actively involving R&D employees in idea generation and evaluation. With the assistance of HR departments, paper questionnaires were distributed and collected. To ensure integrity, two research assistants independently entered and cross-checked the data. Comparisons revealed no significant demographic differences between online and offline respondents, allowing the datasets to be merged.

In total, 378 questionnaires were collected (295 online). After excluding invalid responses, 366 valid responses remained, yielding a response rate of 96.83 %. The sample comprised 61.61 % male and 38.39 % female respondents, with 97.4 % aged 21–40. Educational levels indicated that 79.4 % and 16.5 % held bachelor's and master's degrees, respectively. Overall, the sample demonstrated strong representativeness.

Measurement scales

To ensure linguistic accuracy and validity, this study adopted a double-blind translation procedure and refined established foreign scales through a pilot survey. All variables were measured on a seven-point Likert scale (1 = 'strongly disagree', 7 = 'strongly agree').
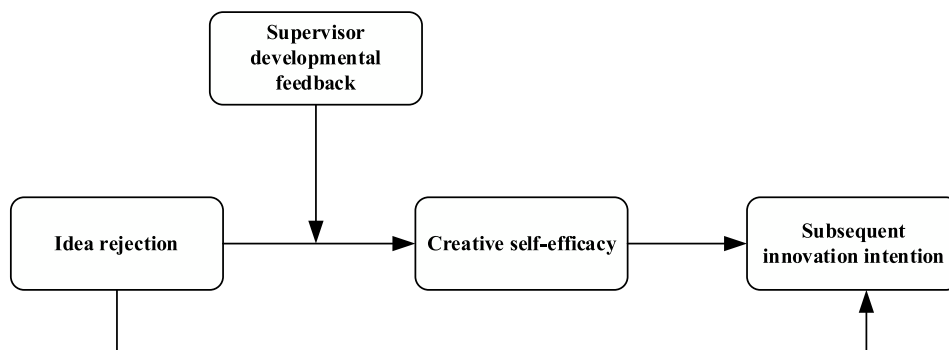

Fig. 1. Research conceptual model.

Before administering the survey, we consulted field experts to assess the professional relevance and representativeness of the items. Further, we conducted a pre-test with senior technical personnel from multiple industries to verify clarity and comprehensibility. Based on the feedback, several ambiguous expressions were revised, ensuring all items were precise and easy to interpret. The subsequent section details the measurement instruments used in this study.

IR: IR refers to managerial behaviours, language, or attitudes that signal non-acceptance and lack of support for creative employee projects. This study focused on employee perceptions of rejection—specifically, instances of disinterest, indifference, or lack of recognition—rather than emotional reactions, such as anger, embarrassment, or reduced confidence. To ensure clarity, all items were phrased consistently, avoiding the use of mixed positive and negative wording that might confuse respondents. IR was measured using a six-item scale adapted from Ng, Thomas *et al.* (2022). The Cronbach's α for this scale was 0.916.

SII: This scale was originally developed by Fishbein and Ajzen (1975) and later refined for the Chinese context by Zhang and You (2014), and comprised three items (α = 0.749).

CSE: CSE was conceptualised as a cognitive belief shaped by environmental feedback, rather than a stable trait. This view aligns with Bandura's (1997) argument that self-efficacy can be dynamically adjusted to task demand and feedback and with Tierney and Farmer's (2002) definition, which emphasises CSE's sensitivity and adaptability to organisational support and evaluative cues. We defined it as employee belief in their ability to generate creative ideas. The scale was adapted from Tierney and Farmer (2002) and Malik (2015) and comprised four items (α = 0.786).

SDF: This measure captured managerial feedback that facilitated employee learning, development, and performance improvement (Zhou, 2003). Adapted from Zhou (2003), it comprised three items (α=0.843). The scale emphasises developmental feedback's constructive nature, focusing on how supervisors clarify the reasons for IR and offer actionable guidance for improvement. Each item reflects a balance of problem diagnosis and forward-looking support, consistent with the theoretical foundation of developmental feedback that fosters employee growth.

Control variables: Research has indicated that individual and contextual factors systematically shape CSE and innovation, which potentially confound focal effects. To address this concern, we included several controls. Demographic attributes, such as age, gender, and education, were controlled for as studies have demonstrated systematic differences in efficacy beliefs across these characteristics (Tierney & Farmer, 2002; Ng et al., 2022). Job tenure was added to capture accumulated mastery experience, a key source of self-efficacy (Bandura, 1997). Organisational and institutional factors were considered by including innovation climate, enterprise type, and industry sector, which influence opportunities and support for innovation (Amabile *et al.*, 1996; Ding & Yu, 2020; Guan & Frenkel, 2019). Finally, goal orientation and task complexity were controlled for, as both shape how individuals interpret setbacks and pursue innovation (Hirst *et al.*, 2009). Including these controls can reduce omitted variable bias and may ensure that the estimated effects reflect the hypothesised mechanisms.

Common method bias

This study employs multiple procedures to minimise common method bias (Podsakoff *et al.*, 2003). First, participants were assured of anonymity and informed that no right or wrong answers existed, with responses being employed solely for research purposes. Second, the number of items was concise to reduce respondent fatigue. Third, Harman's single-factor test was conducted. The exploratory factor analysis revealed that the first factor accounted for 26.46 % of the total variance, well below the 40 % threshold, suggesting that common method bias was minimal.

Data analysis methods

We employed structural equation modelling (SEM) to examine the complex relationships within the conceptual framework. SEM enables simultaneous testing of direct, indirect, and moderating effects among observed and latent variables, reducing bias from separate analyses. We modelled the influence of IR (independent variable) on SII (dependent variable) through CSE (mediator), with developmental feedback from supervisors as a moderator.

Considering the model's multiple constructs and indicators, and the relatively small sample size, we adopted the partial least squares SEM (PLS-SEM) approach (Hair *et al.*, 2016; Fornell & Larcker, 1981). PLS-SEM maximises the explained variance of endogenous constructs and is robust with small or non-normally distributed samples. We utilised SmartPLS 4 to assess the measurement and structural models and evaluate mediation and moderation via bootstrapping. This approach relaxes the distributional and sample size assumptions of covariance-based SEM while yielding results consistent with CB-SEM, ensuring our findings' robustness and accuracy.

Measurement model

Before testing the structural relationships, we assessed the measurement model's reliability and validity. As indicated in Table 1, all factor loadings ranged from 0.762 to 0.873, exceeding the recommended 0.70 threshold (Chin, 1998), which indicates strong indicator reliability. As presented in Table 2, Cronbach's alpha values ranged from 0.749 to 0.916, and composite reliability (CR) values ranged from 0.857 to 0.934, both above the 0.70 benchmark (Hair *et al.*, 2010), confirming satisfactory internal consistency. Average variance extracted (AVE)

Table 1
List of measures and item factor loadings.

Variable	Label	Item	Loading
IR	IR1	My ideas are rejected by my supervisor.	0.843
	IR2	My supervisor does not seem to be interested in my ideas.	0.871
	IR3	My ideas are not endorsed by my supervisor.	0.829
	IR4	My supervisor does not feel excited when I tell him/her about my ideas.	0.839
	IR5	My ideas do not receive support from my supervisor.	0.848
	IR6	My supervisor has an 'indifferent' response to my ideas.	0.801
SII	SII1	After my idea is rejected, I still intend to propose new ideas for improvements in technology, processes, or performance.	0.856
	SII2	After my idea is rejected, I intend to provide original solutions to address problems.	0.790
	SII3	After my idea is rejected, I remain motivated to explore new work methods, technologies, or tools.	0.801
CSE	CSE1	I can adjust my creative problem-solving approach and remain confident, even after my ideas are rejected or fail.	0.765
	CSE2	I am able to keep generating new ideas, even when previous attempts did not succeed or faced criticism.	0.797
	CSE3	I can refine and build on others' ideas, especially when initial ideas require improvement or rethinking.	0.762
	CSE4	I am confident that I can adapt my creative skills to handle unexpected setbacks and changing circumstances.	0.798
SDF	SDF1	While giving me feedback, my supervisor focuses on helping me to learn and improve	0.869
	SDF2	My immediate supervisor never gives me developmental feedback.	0.873
	SDF3	My supervisor provides me with useful information on how to improve my job performance.	0.873

Note: IR: idea rejection; SII: subsequent innovation intention; CSE: creative self-efficacy; SDF: supervisor developmental feedback.

Table 2

Means, variances, and validity analysis of variable measures.

	Mean	Std	Alpha	CR	AVE	CSE	IR	SII	SDF
CSE	5.458	0.799	0.786	0.862	0.609	**0.780**			
IR	3.377	1.312	0.916	0.934	0.704	-0.337	**0.839**		
SDF	5.448	0.842	0.843	0.904	0.759	0.073	-0.028	**0.871**	
SII	5.695	0.764	0.749	0.857	0.666	0.508	-0.202	0.110	**0.816**

Note: The bold numbers in the diagonal row are the square roots of average variance extracted (AVE). IR: idea rejection; SII: subsequent innovation intention; CSE: creative self-efficacy; SDF: supervisor developmental feedback.

values were between 0.609 and 0.759, surpassing the 0.50 criterion, suggesting that each construct captured more than half of the variance in its indicators. We assessed discriminant validity using the Fornell–Larcker criterion and the heterotrait–monotrait ratio (HTMT). As presented in Table 2, the square root of each construct's AVE (bold diagonal) exceeded its correlation with other constructs. The HTMT values (Table 3), which ranged from 0.062 to 0.662, were well below the conservative 0.85 threshold (Henseler *et al.*, 2015). Overall, the measurement model results demonstrated reliability and validity.

Hypothesis testing

Structural model

PLS-SEM tested the hypothesised relationships. Path coefficients, standard errors, and p-values are reported in Table 4. Significance was determined at $p < 0.05$, with 95 % bias-corrected bootstrap confidence intervals (5000 resamples) excluding zero. Fig. 2 illustrates the total effects, while Fig. 3 depicts SDF's moderating effect.

Main effects

Table 4 presents the path analysis results, estimated using the bootstrap method with 5000 subsamples to evaluate significance. The findings reveal that IR significantly and negatively affected SII (β =-0.145, $p = 0.003$), thereby supporting H1. Moreover, IR exerted a significant negative effect on CSE (β =-0.277, $p < 0.001$), lending support to H2. In turn, CSE significantly and positively affected SII ($\beta =$ 0.436, $p < 0.001$). This suggests that IR can directly reduce SII, though its primary influence may operate through CSE.

Indirect and mediating effects

The causal step approach and Sobel test based on the bootstrap method were applied to examine CSE's mediating role in the relationship between IR and SII. The three-step regression results (Table 4) indicated that IR significantly and negatively affected SII (β =-0.145, $p < 0.01$) and CSE (β =-0.277, $p < 0.001$), while CSE positively predicted SII ($\beta = 0.436$, $p < 0.001$). After including CSE as the mediator, IR's direct effect on SII was no longer significant (β =-0.017, $p = 0.767$), suggesting that CSE fully mediated the relationship. The bootstrap analysis results (bootstrapping = 5000, 95 % CI; Hayes, 2017), together with the Sobel test, further confirmed this conclusion: IR's direct effect on SII was not significant (β =-0.009, LLCI =-0.067, ULCI = 0.048, including zero), whereas the indirect effect via CSE was significant (β =-0.071, LLCI

Table 3

Discriminant validity and the HTMT analysis of the constructs.

	1	2	3	4
CSE	-			
IR	0.393	-		
SDF	0.089	0.062	-	
SII	0.662	0.241	0.138	-

Note: IR: idea rejection; SII: subsequent innovation intention; CSE: creative self-efficacy; SDF: supervisor developmental feedback.

Table 4

Path analysis results (bootstrapping times = 5000).

Model	β	SE	P-Value	Hypothesis	Remarks
Model 1					
IR→SII	-0.145	0.049	0.003	H1	Supported
Model 2					
IR→CSE	-0.277	0.052	0.000	H2	Supported
Model 3					
IR→CSE	-0.337	0.051	0.000	-	-
IR→SII	-0.017	0.056	0.767	-	-
CSE→SII	0.436	0.065	0.000	-	-
IR→CSE→SII	-0.147	0.029	0.000	H3	Supported
Model 4					
IR→CSE	-0.335	0.051	0.000	-	-
IR→SII	-0.018	0.056	0.740	-	-
CSE→SII	0.434	0.064	0.000	-	-
SDF→SII	0.050	0.065	0.441	-	-
SDF*IR→CSE	0.191	0.057	0.001	H4	Supported
SDF*IR→CSE→SII	0.083	0.028	0.004	H5	Supported

Note: IR: idea rejection; SII: subsequent innovation intention; CSE: creative self-efficacy; SDF: supervisor developmental feedback; a: the mediation; *$p < 0.05$, ** $p < 0.01$, and *** $p < 0.001$.

=-0.106, ULCI =-0.041, excluding zero). Thus, H3 is supported.

Moderating effects

SDF significantly moderated the relationship between IR and CSE ($\beta = 0.191$, $p < 0.01$), supporting H4. As illustrated in Fig. 3, higher levels of SDF attenuated IR's negative impact on CSE, whereas lower levels amplified it. The moderated mediation effect (SDF × IR→CSE→SII) was also significant ($\beta = 0.083$, $p < 0.01$), thus supporting H5 (Table 4). These findings suggest that developmental feedback not only buffers IR's detrimental effect on CSE but also indirectly helps sustain employees' SII.

Moderated mediation effect testing

Table 5 reveals that when SDF was low (Mean-1 SD), IR's indirect effect on SII via CSE was significant (β =-0.228, 95 % CI [-0.319, -0.146]). Conversely, at high SDF levels (Mean+1 SD), the indirect effect remained significant but weaker (β =-0.062, 95 % CI [-0.141, -0.003]). These findings demonstrate a significant moderated mediation effect (index = 0.083, 95 % CI [0.025, 0.138]; Table 5). High SDF levels buffered IR's negative indirect effect, whereas low SDF levels amplified the effect. This pattern supports H5.

Robustness checks

Alternative dependent variable

We conducted additional checks to ensure our findings' robustness. Prior research has highlighted IR's negative consequences for innovation. Scholars have suggested that repeated rejection could undermine employees' general job performance or drive withdrawal from work activities. Testing this possibility helps clarify whether the observed effects extend beyond innovative motivation to broader work outcomes.
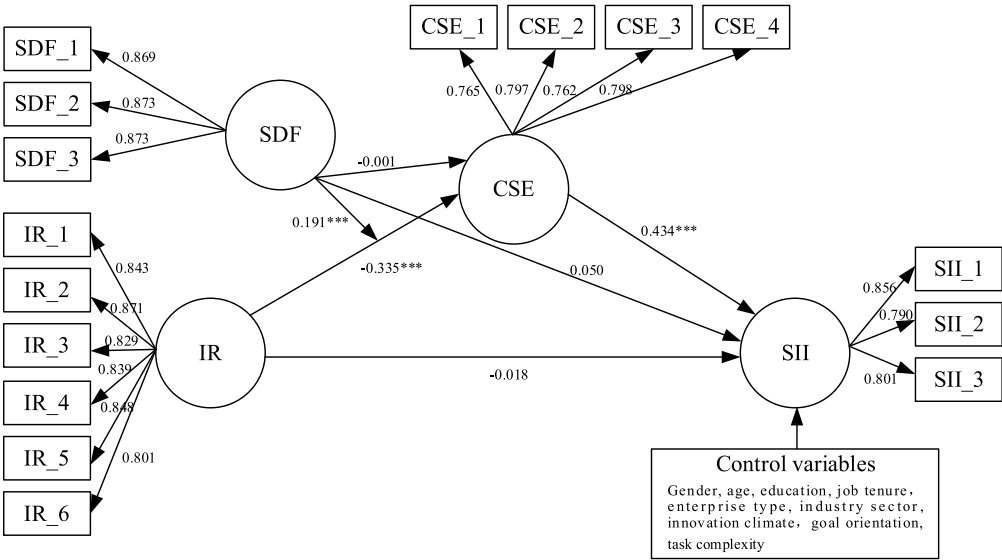
Fig. 2. Structural model results.

Note: IR: idea rejection; SII: subsequent innovation intention; CSE: creative self-efficacy; SDF: supervisor developmental feedback; a: the mediation; *p < 0.05, ** p < 0.01, and *** p < 0.001.
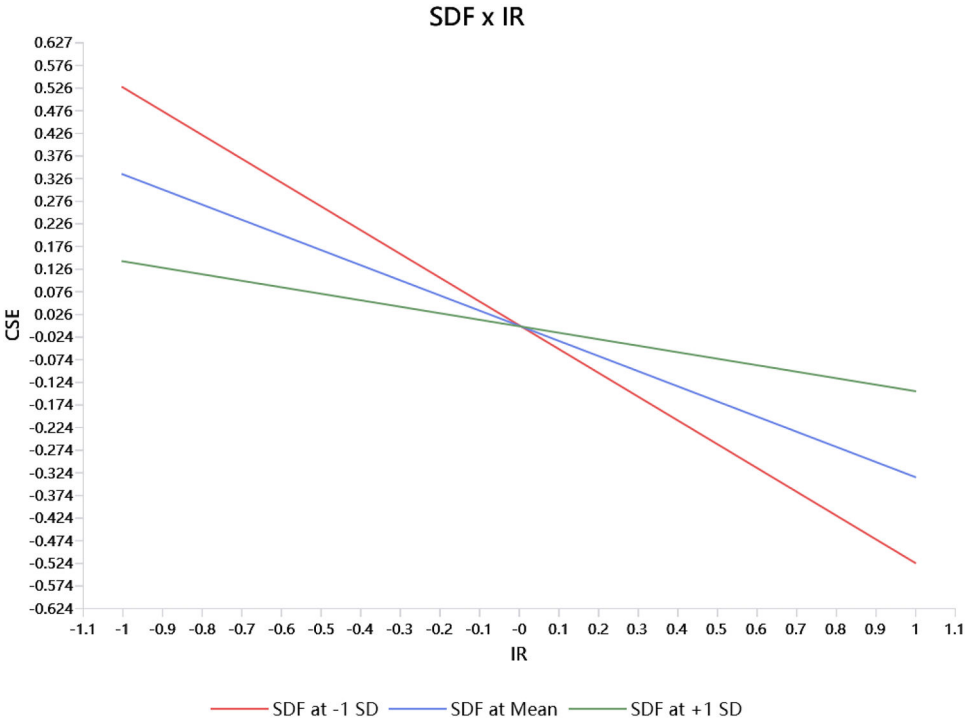

Fig. 3. SDF's moderating effect between IR and CSE at three different levels of the mean.

Table 5

Results of moderated mediation effect analysis.

Moderating variable	Values of moderating variable	Mediating effect	Confidence interval of mediating effect	Moderated mediation effect	Confidence interval
SDF	Low: Mean-1SD	-0.228	[-0.319, -0.146]	0.083	[0.025,0.138]
	High: Mean+1SD	-0.062	[-0.141, -0.003]		

For this purpose, we utilised individual work performance (IWP) as an alternative dependent variable, measured with validated items such as 'My work was of good quality' (Koopmans *et al.,* 2012; Pulakos *et al.,* 2000). The regression results (Table 6) revealed a positive but nonsignificant association between IR and IWP ($\beta = 0.087$, $p = 0.392$), indicating that IR does not directly impair employee formal job performance. This result aligns with the SME context, wherein making creative suggestions is largely discretionary and not formally associated

Table 6

Robustness check using individual work performance as an alternative dependent variable.

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	t value (|O/STDEV|)	p value
Relationship					
IWP → SII	0.087	0.095	0.102	0.855	0.392
Control variables					
Gender	0.088	0.084	0.101	0.872	0.383
Age	0.062	0.064	0.053	1.175	0.240
Education	-0.056	-0.054	0.056	0.995	0.320
Job tenure	0.262	0.260	0.057	4.561	0.000
Enterprise type	-0.045	-0.045	0.047	0.957	0.339
Industry sector	-0.122	-0.123	0.068	1.782	0.075
Innovation climate	0.007	0.006	0.058	0.120	0.904
Goal orientation	0.243	0.247	0.068	3.579	0.000
Task complexity	0.098	0.095	0.068	1.441	0.150

Note: IWP: individual work performance; SII: subsequent innovation intention.

with performance appraisal. Moreover, numerous rejected ideas are related to process or interdepartmental improvements rather than core tasks. Thus, the nonsignificant effect supports our claim that IR primarily undermines innovative motivation rather than immediate work performance.

Assessment of unobserved heterogeneity

To assess potential unobserved heterogeneity, we employed the FIMIX-PLS procedure following Sarstedt et al. (2011) and Hair et al. (2016), estimating one-to six-segment solutions (Table 7). The model selection criteria produced divergent signals: AIC and AIC3 favoured a six-segment solution, AIC4 suggested three segments, while BIC and CAIC pointed to a one-segment structure. Moreover, MDL5 indicated a one-segment solution. Regarding fit quality, the EN values for the multi-segment models ranged from 0.664 to 0.824, exceeding the recommended threshold of 0.50, with all segments meeting the minimum sample size requirement. Collectively, the stronger support from BIC, CAIC, and MDL5 for a one-segment solution, combined with acceptable EN values across alternatives, suggested that unobserved heterogeneity was low. Accordingly, the structural model results for the full sample can be considered robust.

Assessment of nonlinear effects

To examine potential nonlinearity in the model relationships, we employed Ramsey's RESET test (Ramsey, 1969) following Sarstedt et al.

(2020). We tested both quadratic and cubic terms for IR→CSE, CSE→SII, and IR→SII. As presented in Table 8, none of the quadratic or cubic terms reached statistical significance (all $p > 0.05$), indicating that the hypothesised relationships were adequately captured by a linear PLS-SEM specification, which demonstrates our results' robustness to nonlinear misspecification. Table 8

Assessment of endogeneity

To examine potential endogeneity in the structural model, we followed the Gaussian copula procedure recommended by Park and Gupta (2012) and applied in PLS-SEM research (Hult et al., 2018). This approach tests whether key predictor constructs in the model are correlated with the structural error term, which would indicate possible endogeneity bias.

As presented in Table 9, the Gaussian copula terms for the main structural paths were not statistically significant (all $p > 0.05$). Specifically, the copula term for the path from CSE to SII was non-significant ($\beta =-0.019, p = 0.890$), as was the copula for the direct path from IR to SII ($\beta =-0.046, p = 0.755$). Likewise, for the mediating pathway, neither the copula term for IR→CSE ($\beta =-0.052, p = 0.823$) nor for IR→CSE→SII ($\beta =-0.028, p = 0.822$) reached statistical significance. These findings suggest that endogeneity was unlikely to bias the estimated relationships in this study and provided additional support for the structural model's robustness and validity.

Discussion

Research has emphasised that IR typically reduces employee willingness to engage in innovation, mainly because of repeated negative experiences, which can discourage initiative and persistence (Howe & Dweck, 2016; Mueller et al., 2012). Scholars have further argued that repeated rejection can suppress innovative behaviour and may drive employees to withdraw from innovation activities entirely (Hareli & Rafaeli, 2008; Baer, 2012). While these studies provide valuable insights into rejection's negative consequences, they usually overlook the psychological mechanisms and contextual factors that determine whether employees disengage or continue to innovate.

Our study advances this stream of literature by identifying CSE's mediating role. Utilising social cognitive theory (Bandura, 1997), we demonstrate that self-efficacy is not fixed but sensitive to situational cues. IR undermines employees' creative confidence and abilities, which

Table 8

Results of non-linearity and heterogeneity for robustness.

Nonlinear relationship	Coefficient	R	F	t value	p value
IR*IR → CSE	0.046	0.498	9.699	1.863	0.063
CSE*CSE → SII	0.022	0.571	14.229	0.610	0.542
IR*IR → SII	0.030	0.428	6.615	1.210	0.227

Table 7

Fit indices for the one-to six-segment solutions.

Criteria	Number of segments					
	1	2	3	4	5	6
AIC	1749.337	1674.901	1621.147	1514.438	1470.536	1428.258
AIC3	1766.337	1709.901	1674.147	1585.438	1559.536	1535.258
AIC4	1783.337	1744.901	1727.147	1656.438	1648.536	1642.258
BIC	1814.228	1808.5	1823.454	1785.452	1810.259	1836.688
CAIC	1831.228	1843.5	1876.454	1856.452	1899.259	1943.688
HQ	1775.204	1728.157	1701.793	1622.472	1605.959	1591.07
MDL5	2209.792	2622.895	3056.682	3437.512	3881.15	4326.412
LnL	-857.669	-802.45	-757.574	-686.219	-646.268	-607.129
EN	NA	0.8	0.664	0.774	0.772	0.824
NFI	NA	0.841	0.642	0.732	0.707	0.765
NEC	NA	67.206	112.77	75.882	76.572	59.231

Table 9
Assessment of endogeneity test using the Gaussian copula approach.

Test	Construct	Coefficient	p value
Gaussian copula of model 1	GC (CSE →SII) → SII	-0.019	0.890
Gaussian copula of model 2	GC (IR → SII) → SII	-0.046	0.755
Gaussian copula of model 3			
Gaussian copula of model 4	GC (IR → CSE) →CSE	-0.052	0.823
	GC (IR → CSE) → SII	-0.028	0.822

impacts the intention to propose new ideas. This finding extends earlier work (Tierney & Farmer, 2002; Gong *et al.*, 2009) by highlighting self-efficacy as a dynamic mechanism that links negative experiences to future innovative behaviour.

Additionally, this study contributes by demonstrating the moderating role of SDF. Research has emphasised employees' internal coping strategies (Shepherd & Cardon, 2009); however, our findings show that managerial communication can also play a protective role. Constructive feedback enables employees to reinterpret rejection as the result of contextual or technical constraints rather than personal incompetence. This reframing helps preserve self-efficacy and sustain innovation intention, echoing research that suggests supportive leadership potentially transforms discouraging events into learning opportunities (Zhou, 2003; Piezunka & Dahlander, 2019).

Collectively, our results underscore the importance of individual belief systems and organisational practices in shaping innovation persistence. By integrating self-efficacy's mediating role with developmental feedback's buffering effect, we provide a more nuanced understanding of how and when IR can be a constructive force for long-term innovation. These dynamics are particularly relevant in SMEs, wherein limited resources and flat structures mean that IR exerts a more direct effect on employees' confidence and subsequent innovation behaviour than in larger firms.

Theoretical implications

The study focuses specifically on IR, rather than idea generation or adoption. In organisational innovation, rejection tends to occur more frequently (Cao & Luo, 2023; Hu *et al.*, 2025). While research has examined how to stimulate idea generation or the factors influencing idea adoption, limited attention has been paid to rejection's consequences (Ng *et al.*, 2022). Sustained innovation relies on the continued efforts of idea initiators. When their ideas are rejected, effort may appear wasted, resulting in reduced motivation for further innovation. Viewed dynamically, our findings suggest that successful organisational innovation depends on the production and adoption of ideas and sustaining motivation intention after rejection. This insight extends existing research by highlighting rejection as a critical yet overlooked stage in the innovation process.

From a micro perspective, this study underscores the mediating role of CSE—a flexible and adaptive construct that links innovation failure to diminished innovative behaviour. We specifically investigate how IR diminishes self-efficacy, which, in turn, reduces employee willingness to innovate. This sequence reflects the psychological responses individuals experience when a setback weakens innovative drive. Rather than fostering constructive learning, rejection frequently triggers value attribution bias and emotional exhaustion, further suppressing innovative engagement. While research has affirmed CSE's importance in innovation (Liu *et al.*, 2016; Wang *et al.*, 2018), most studies focus on how it can be enhanced. This focus ignores how motivation declines and whether it can be restored. Our findings reveal that CSE is malleable and may decrease when ideas are rejected, but can be restored or strengthened under supportive conditions. This perspective focuses on employee resilience to pursue innovation despite setbacks. By adopting this dynamic view, we challenge static conceptions of self-efficacy and extend social cognitive theory within the context of innovation failure. By

situating the analysis in SMEs, our study identifies an important condition. In smaller firms, wherein routines and slack resources are limited, individual-level mechanisms linking rejection, efficacy beliefs, and feedback have greater influence on innovation outcomes.

Our findings suggest that high-quality feedback and harmonious work passion may reduce rejection's negative impact. Recent evidence has reported that passion promotes creativity and adaptive outcomes (Pollack *et al.*, 2020). Moreover, research has indicated that constructive feedback enhances employees' creative performance (Kim & Kim, 2020), underscoring that managers should cultivate an environment of constructive feedback to preserve employee self-efficacy and sustain creative motivation.

Our research highlights SDF's pivotal role in restoring employee confidence after IR. Studies emphasising individual coping strategies, such as resilience and self-regulation, have frequently overlooked the proactive role that supervisors and organisations can play (Harmeling *et al.*, 2017). Our findings demonstrate that developmental feedback characterised by clarity (identifying the causes of rejection), specificity (providing actionable guidance), and encouragement (reinforcing growth potential) enables employees to constructively reinterpret rejection. This resonates with Ashford and Cummings (1983), who emphasise feedback's role in shaping attribution and sustaining employee innovation. It further suggests that managers should be attentive to feedback's psychological impact and strategically employ it to maintain employee innovative drive in the face of rejection.

Practical implications

This study's practical significance lies in demonstrating how organisations can turn IR into a driver of sustained innovation, rather than an inhibitor of innovative processes. When managers reject employee ideas, they should not stop at negation but consider the use of a constructive explanatory communication strategy.

A constructive explanatory communication strategy should explain the objective reasons for rejection. This may involve prioritising resources for projects aligned with the core strategy or by highlighting gaps between current technologies and market demand. This clarity prevents employees from interpreting rejection as a judgment of their ability, thereby preserving CSE.

Further, managers could provide constructive and actionable suggestions for improvement. For example, they could recommend strengthening user validation data or adjusting technical parameters to reduce implementation costs. These practical insights transform rejection from a perceived failure into a learning opportunity, helping employees shift from frustration to a problem-solving mindset, which fosters a resilient innovation culture.

Additionally, managers could demonstrate commitment to rejected ideas by clarifying their future potential, elucidating that rejection does not mean the idea had no value. This may include highlighting that the idea may be reconsidered when resources, strategies, or market conditions change. Outlining specific actions, such as giving the idea a three- to six-month incubation period or placing it in a repository for future review, may also be beneficial. This approach signals to employees that their contributions remain meaningful, preserving CSE and encouraging innovative engagement.

By systematically applying this feedback approach, organisations can reduce the psychological costs of innovation and foster a culture of failure learning. This organisational cultural shift may help break the cycle of high investment/low sustainability associated with innovation, paving the way for a strategic transition from short-term project incentives to long-term innovative resilience. For SMEs, constructive feedback is not only beneficial but also essential. With fewer buffers and greater reliance on employee initiative, feedback practices are pivotal for sustaining innovative momentum and ensuring creativity remains a key source of competitive advantage.

Limitations and future directions

This study advances the understanding of the creative process of innovation, but has several limitations that warrant further inquiry. First, the sample is limited to employees in R&D and technical departments, focusing on technological and product creativity. However, whether the findings extend to process, model, or brand creativity remains unknown. Future research should examine a broader range of departments and creativity types to enhance generalisability.

Second, this study relies on self-reported data, particularly regarding employee intention to innovate rather than actual creative outcomes. Future research could incorporate multi-source evaluations, such as ratings from colleagues or supervisors, to assess the quality and effectiveness of secondary innovation. Employing methods such as the experience sampling method or experimental design would allow researchers to track real-time fluctuations in self-efficacy under different rejection feedback conditions, offering deeper insights into its mediating role (Ilies, Wilson & Wagner, 2009).

Third, this study focuses on SDF as a boundary condition. Other contextual and individual factors—such as leader-member exchange, trust, entrepreneurial alertness, cognitive reappraisal, or creative reworking behaviours—might also shape employee responses to IR. Future work should integrate these variables into multi-pathway models to capture the complex interplay of mechanisms underlying rejection–response dynamics. These integrative approaches would clarify which factors exert the strongest influence and how they interact to sustain innovation. This line of inquiry may also provide organisations with more comprehensive and evidence-based strategies to strengthen innovation management.

Finally, this study is limited to SMEs in the Chinese market and should be interpreted as a case study. Although this context provides valuable insights owing to its distinct institutional and cultural characteristics, the findings may not be directly generalisable to other settings. Future research should replicate and extend the present model in different countries and organisational contexts to examine its broader validity and explore how cultural and institutional variations shape employees' responses to IR.

CRediT authorship contribution statement

Minrong Wen: Writing – review & editing, Writing – original draft, Validation, Methodology, Funding acquisition, Formal analysis, Conceptualization. **Tengteng Zhu:** Writing – review & editing, Writing – original draft, Supervision, Resources, Project administration, Conceptualization. **Fangfang Yang:** Writing – review & editing, Writing – original draft, Methodology, Funding acquisition, Conceptualization. **Huixia Huang:** Writing – review & editing, Writing – original draft, Methodology, Funding acquisition, Formal analysis, Data curation.

Declarations of competing interest

None.

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