Research Paper

# Employees' Independent Thinking as an Innovation: Its Impact Towards Organizational Performance in Small and Medium Enterprise

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**Abstract**

In the current context of fierce market competition faced by small and medium-sized enterprises (SMEs), employees' independent thinking is crucial for promoting adaptability and innovation. However, traditional managers often prioritize employees' compliance and execution over independent thinking, especially in the development of information technology. This study aims to explore the impact mechanism of employees' independent thinking ability on enterprise organizational performance, focusing on the mediating role of organizational innovation and organizational behavior and the moderating effect of employee empowerment. This empirical study employed a quantitative research design using structural equation modeling (SEM) and collected data from 427 employees randomly selected from small and medium-sized enterprises in Guangdong, China. Based on the findings, most respondents were middle-aged males with 7–9 years of work experience, employed in private firms, with an equal proportion of employees in organizations ranging from 51–250 and more than 251. The regression shows that employee independent thinking (EIT) has a strong and significant positive effect on organizational innovation and organizational behavior. It also directly improves employee performance. Organizational innovation partially mediates the relationship between EIT and performance. However, employee empowerment does not significantly influence or change the effect of independent thinking on their performance. This study highlights theoretical concepts on the relationship between independent thinking ability and enterprise organizational performance, thereby providing synergy with active employee participation for creative performance aligned with its operations and corporate management practices.

**Keywords** *Independent Thinking; Employee Empowerment; Organization Innovation; Performance; Organizational Citizenship*

## INTRODUCTION

Amidst intense commercial rivalry, sustaining a competitive advantage is the cornerstone of organizational sustainability and growth. Conventional strategies for enhancing market position - such as adopting standardized governance frameworks (Ugbebor et al., 2024), recruiting pedigree professionals, and developing corporate ethos (Ghaleb, 2024) remain standard organizational strategies. However, these conventional metrics inadequately harness core human capital potential and cognitive resources. Notably, the workforce's independent thinking and reasoning capacity (Mehraein et al., 2023) emerges as an underexplored strategic differentiator that demands prioritized attention.

Some conventional organizations prioritize quantifiable work performance outputs and technical competencies in human capital management while systematically unnoticed independent cognitive capacities. This oversight inadvertently suppresses creative initiative and adaptive problem-solving capabilities (Kramar, 2022; Sinambela et al., 2022), particularly within enterprises characterized by rigid hierarchical frameworks and administrative rigidity, where institutional barriers constrain cognitive autonomy and stifle innovative implementation (LI, 2022; Mehraein et al., 2023). The traditional performance appraisal system has also failed to effectively motivate employees' independent thinking, making them more inclined to follow rules and less willing to take risks to try new methods. It is important that the organization should focus on innovation. Guoha and Dellova (2025) highlighted that product and service innovation attracts repeat customers; thus, this process may also depend on employees' independent thinking.


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The integration of intelligent technologies presents a paradoxical efficiency-innovation dilemma-it may also make employees lose their independent thinking ability. The widespread adoption of AI enhances operational productivity by automating tasks. It potentially erodes workforce cognitive autonomy through two critical mechanisms (Chu, 2021). According to Guo (2021), excessive reliance on algorithm-driven, standardized processes may supplant essential analytical capacities, and employees' independent thinking increasingly defers to automated decision-making frameworks.

Small and medium enterprises encounter structural limitations compared to corporate giants across technological infrastructure, resource allocation, and brand equity (Dooley et al., 2022; Wu & Wang, 2023), and confront particularly acute competitive pressures in dynamic markets. To secure operational resilience, these organizations require strategic cultivation of workforce cognitive autonomy and creative problem-solving capacities, enabling rapid adaptation to evolving market conditions and consumer expectations (Gustina et al., 2025). This reality underscores the critical need to investigate the causal pathways through which staff intellectual self-direction enhances organizational viability in resource-constrained environments.

Independent thinking implies a practice of free will on employees' own ideas, not relying on others' instructions or orders of command. It denotes the intellectual capacity for self-directed problem evaluation, original concept generation, and informed decision-making (LI, 2022; Liu et al., 2024), with critical thinking constituting a structured form of intellectual self-reliance that refines cognitive processes (Manaf et al., 2022). Workforce members who exhibit robust cognitive independence demonstrate superior adaptability to environmental shifts, enhanced capacity for opportunity identification (Brown et al., 2019), and greater potential to drive organizational innovation. Paradoxically, operational practices in numerous organizations - particularly within SME sectors - systematically undervalue this cognitive asset, prioritizing rigid protocols, centralized authority structures, and algorithmic decision systems that inadvertently restrict creative expression and proactive engagement (Habib et al., 2024). Critical thinking, on the other hand, involves collecting information to ensure logical accuracy in the process of any task.

Moreover, the upsurge of artificial intelligence (AI) and automation has been even more complicated. While AI has many advantages in terms of efficiency and accuracy, it might have adverse effects on employees' independent thinking (Girma, 2025). Over-dependence on AI may lead to a decline in employees' critical thinking (Gerlich, 2025) and problem-solving skills, as they may become accustomed to relying on preset solutions rather than generating their own ideas. This cause is a serious problem for businesses that may weaken their long-term innovation and competitiveness (Acemoglu, 2021).

Due to the value of thinking independently and the potential harm done by the current market situation (Cherunilam, 2021), it is vital to explore how to efficiently use this cognitive feature to improve organizational competitiveness (Krushkov & Zayakova-Krushkova, 2024). To study how employees' autonomous, innovative ability affects corporate competitiveness (Krushkov & Zayakova-Krushkova, 2024), which is confronted with high market competition and the influence of artificial intelligence. Even though independent thinking is an important means to foster innovation and adaptability (Miahkykh, 2025), human resource management in traditional organizations tends to ignore employees' independent thinking and focuses more on employee compliance and task performance. On the other hand, under the emerging wave of artificial intelligence, it can greatly improve the work efficiency of employees on the premise of providing efficient and convenient services, but at the same time it will reduce the independent thinking ability of employees to the greatest extent due to the lack of working process and analytical judgment provided by artificial intelligence, which also makes employees into the passive servants

of artificial intelligence(Bozkurt et al. For SMEs, developing independent thinking ability is not only an urgent need but also a hard nut to crack, as enterprises lack the resources to undertake in-depth staff development (Qi & Zheng, 2025).

Another research gap is the limited focus on the moderating effects of contextual factors in this relationship. There are limited empirical studies on how empowerment interacts with autonomy to impact organizational outcomes, particularly for small and medium-sized enterprises. Such a lack of research gaps is important because small and medium-sized enterprises tend to operate in resource-constrained environments and may derive greater gains by empowering their employees and fully leveraging their cognitive potential.

The theoretical significance of this study is that it enriches the research on the relationship between independent thinking ability and enterprise competitiveness, reveals the complete transmission mechanism of "cognition-ability/behavior-competitiveness", and proposes a new management paradigm of "employee independent thinking organizational innovation/citizenship behavior → enterprise organizational performance". Its practical significance is to provide useful insights for corporate management practices to improve corporate competitiveness by cultivating employees' independent thinking ability, optimizing organizational innovation and organizational citizenship behavior, and reasonable authorization.

This study aims to achieve the following objectives:

1. To determine the demographic composition of the respondents involved in the study.
2. To examine the causal relationship between employees' independent thinking and enterprise organizational performance.
3. To assess the causal relationship between employees' independent thinking and organizational innovation.
4. To explore the causal relationship between employees' independent thinking and organizational citizenship behavior.
5. To investigate the causal relationship between employees' independent thinking and employee empowerment.
6. To analyze the relationship between organizational citizenship behavior and organizational innovation ability, and between employees' independent thinking and enterprise organizational performance.
7. To identify the mediating role of employee empowerment in the relationship between independent thinking and enterprise organizational performance.

## LITERATURE REVIEW

### Employees' independent thinking ability and organizational innovation

Organizational innovation encompasses an institution's capacity to address challenges and generate value through novel approaches as it navigates complex environments (Alharbi et al., 2019). The cognitive diversity framework posits that the workforce's independent reasoning capabilities introduce varied cognitive perspectives, facilitating innovative idea generation within corporate structures and strengthening organizational creativity (Liu et al., 2024; Nguyen et al., 2022). Studies investigations consistently demonstrate that staff members' evaluative reasoning and independent problem-solving skills enable organizations to recognize emerging opportunities, thereby driving innovative progression within enterprises (McCuen, 2023; Zhang et al., 2023).

As a key driver of organizational innovation, employees' independent thinking has received extensive theoretical support in the fields of organizational behavior and innovation management. Amabile's Componential Theory of Creativity (Amabile & Mueller, 2024) offers fundamental insights in this domain, identifying three essential internal elements for individual creativity:

discipline-specific competencies, innovation-generation processes, and inherent work motivation. Notably, innovation-generation mechanisms directly correspond to independent thinking capacities, incorporating vital attributes like adaptive cognition, calculated risk-taking, and paradigm-challenging approaches (LI, 2022).

More importantly, empirical studies also confirm the importance of independent thinking in fostering organizational innovation. Liu et al. demonstrated that when leaders are able to give feedback, employees' voice behaviors, a key manifestation of independent thinking, could also positively predict team innovation performance (Lee et al., 2021; Miao et al., 2020; Tsameti et al., 2023). This aligns with the theory of psychological safety. Psychological safety theories highlight that organizations can successfully foster the spirit of innovation by establishing a safety space that facilitates employees in presenting innovative ideas, thereby stimulating innovation (Xu et al., 2022). The mechanism of organizational creativity interaction, proposed from a system perspective, is that the interaction between individual cognitive style (e.g., the tendency toward independent thinking) and organizational environmental determinants jointly defines the amount of innovation output (Christensen-Salem et al., 2021).

Modern workforce competencies prioritize inventive reasoning, analytical problem-solving, and holistic systems thinking (Leopold et al., 2025), all fundamentally connected to independent cognition. Independent thinking equips professionals to generate actionable solutions in intricate scenarios, driving continuous innovation. While artificial intelligence technologies enhance problem-solving capabilities, overreliance on these tools may impair independent cognitive development (Szmyd & Mitera, 2024). This underscores the heightened importance of self-directed reasoning in complex task environments, where individuals must derive solutions through independent analysis rather than relying on external support systems.

According to Chen et al (2019), employees' independent thinking ability mainly promotes organizational innovation through two paths: cognitive diversity and intrinsic motivation, but its effectiveness is highly dependent on a supportive social environment and effective leadership practices (Liehr & Hauff, 2025).

**Employees' independent thinking ability and organizational citizenship behavior**

Organizational citizenship behavior (OCB) refers to discretionary actions employees undertake beyond their official responsibilities to enhance organizational effectiveness and goal achievement (Worku & Debela, 2024). Grounded in social cognitive theory, research demonstrates that workers' independent reasoning capacities enable them to comprehend institutional objectives more profoundly, fostering organizational accountability and collaborative attitudes that naturally culminate in citizenship behaviors (Lee et al., 2025).

Even though the effects of employees' independent thinking and organizational citizenship behavior (OCB) are a major issue in organizational behavior research, the evidence regarding the detailed mechanisms underlying these effects remains insufficient. Current investigations reveal that self-efficacy serves as a crucial mediator in this relationship through social cognitive mechanisms (Ullah et al., 2021). Modern enterprises increasingly recognize independent thinkers as vital strategic assets - dynamic resources capable of adapting to evolving market conditions and consumer expectations (Aggarwal, et al., 2024).

Complementary insights emerge from social exchange theory, which posits that self-directed thinkers exhibit heightened sensitivity to perceived organizational support and subsequently reciprocate through enhanced OCB performance (Sulistio & Darmastuti, 2022). This reciprocal dynamic becomes particularly pronounced in high-trust work environments. Trait activation theory introduces situational moderators, suggesting that context-independent thinkers excel in unconstrained creative tasks such as novel product development and demonstrate superior

performance in decontextualized problem-solving scenarios (Guo et al., 2025; Tett et al., 2021).

Notably, excessive organizational focus on citizenship behaviors (COB) risks triggering "citizen fatigue" through external pressures, potentially diminishing COB's effectiveness. Research indicates both prosocial workplace conduct and citizenship-related stressors differentially consume individual energy reserves, ultimately causing resource attrition with distinct effects on exhaustion levels (Netchaeva et al., 2023). This necessitates adopting multidimensional perspectives to unravel the intricate interplay among these phenomena while investigating additional underlying drivers and preconditions that shape organizational citizenship manifestations. Therefore, the proposed hypothesis:

**H2:** Employees' independent thinking ability has a significant positive impact on organizational citizenship behavior

**Organizational Innovation Capability and Enterprise Organizational Performance**

Organizational Innovation Capability (OIC) represents an enterprise's capacity to implement novel solutions across product development, service delivery, operational processes, and management practices through a strategic combination of information, technological expertise, and organizational assets (Aggarwal, et al., 2024; Mendoza-Silva, 2021). This innovative capacity serves as a foundational element within organizational planning and a differentiating asset that drives exceptional business outcomes. Scholarly consensus identifies innovation as a critical moderating variable affecting organizational success, as it strategically influences various performance drivers (Fan et al., 2021). In today's volatile market conditions, businesses must prioritize enhancing operational effectiveness dimensions, such as creative problem-solving and client-centric agility, to establish market leadership (Azeem et al., 2021).

Dynamic capabilities reflect an organization's systematic approach to embedding competitive advantages through strategic resource allocation. Firms actively align, reconfigure, and refresh both physical and intellectual resources to address evolving business landscapes (Kero & Bogale, 2023). This framework emphasizes proactive organizational adaptation through continuous transformation, requiring leaders to cultivate analytical thinking that challenges assumptions and synthesizes complex information for effective change management.

Empirical studies demonstrate that the combination of creative capacity and collaborative innovation practices substantially enhances SME performance. While open innovation serves as a critical performance enhancer, organizational creativity emerges from the collective imagination of individuals, team synergies, supportive workplace ecosystems, and knowledge generation processes (Rumanti et al., 2023). Current research limitations predominantly stem from narrow conceptualizations that focus only on individual- and team-level creative components. Therefore, the hypotheses are as follows.

**H3:** Organizational innovation capability has a significant positive impact on the organizational performance of small and medium-sized enterprises

**H4:** Organizational innovation ability has a significant mediating effect between employees' independent thinking ability and enterprise organizational performance.

**Organizational Citizenship Behavior and Enterprise Organizational Performance**

Organizational citizenship behavior (OCB) comprises employee behavior for the good of the organization (individual level) that goes beyond delineated task requirements, is not specified as mandatory in organizational job descriptions, and is unrelated to one's functional role (organizational level). OCB is essential because it complements the organization's objectives and performance by facilitating interaction between individuals and the organization. Employees are an important resource for any organization, and their attitudes and behaviors directly impact their

performance and the organization's overall performance (Hermanto & Srimulyani, 2022). Individual performance is one of the most important concerns for organizations because employees' performance is a main factor in determining an organization's survival.

Organizational citizenship behavior (OCB) exerts a substantial beneficial influence on organizational effectiveness. Comprehensive studies reveal that such behaviors generate favorable outcomes for both individual contributors and broader institutional operations. The primary mechanisms through which OCB enhances organizational success involve elevating staff contentment with their roles, reinforcing dedication to organizational objectives, and fostering collaborative synergies among teams. Additionally, these citizenship behaviors amplify collective operational efficiency by solidifying team unity and coordination dynamics (Liao et al., 2022). Research indicates that OCB partially mediates the relationship between work fulfillment and task accomplishment, with this mediating pattern remaining consistent across genders (Casu et al., 2021). Employee motivation emerges as a critical determinant of OCB manifestation, particularly intrinsic drive. Individuals with stronger internal motivation demonstrate superior professional ethics compared to peers, thereby reflecting heightened accountability in their organizational roles (Widarko & Anwarodin, 2022).

It's crucial to recognize that contextual variables may moderate OCB's effectiveness. Environmental elements such as workplace stress levels, leadership approaches, and employee mental health status potentially alter the OCB-performance correlation (Budur & Demir, 2022; Mustofa & Muafi, 2021; Ruiz-Palomino et al., 2023). Consequently, organizational leaders should implement management strategies that optimize working conditions and refine leadership practices to encourage citizenship behaviors, thereby maximizing institutional outcomes.

Social exchange theory posits that employees perceiving organizational support tend to exhibit greater diligence and loyalty. When workforce members feel genuinely included and appreciated within their institutional framework, they develop an inherent obligation to maximize their contributions, facilitating peak organizational functioning (Kao et al., 2023). Empirical evidence further establishes that job satisfaction is positively correlated with both job performance and OCB, thereby substantially affecting individual attendance patterns and staff retention rates—critical factors in maintaining corporate competitiveness. Below are the research propositions:

**H5:** Organizational citizenship behavior has a significant positive impact on the organizational performance of small and medium-sized enterprises.

**H6:** Organizational citizenship behavior has a significant mediating effect between employees' independent thinking ability and enterprise organizational performance.

**Employee empowerment**

When organizations cultivate empowerment among workers by enabling them to derive purposeful significance aligned with corporate values and benchmarks, this cultivates deeper psychological investment that substantially diminishes employees' inclination to depart. Research reveals that the intensity of individuals' organizational allegiance directly corresponds to weakened desires for career transitions, with the strength of this bond emerging as a crucial mitigating factor against attrition (Murray & Holmes, 2021). Empirical analyses consistently reveal that workforce autonomy and professional fulfillment operate as interconnected elements driving corporate achievements, with enhanced decision-making latitude and employment contentment being reinforced by observable links to elevated workplace productivity and innovation outcomes (Ali et al., 2025).

Research demonstrates that employee job satisfaction serves as a significant mediating factor between organizational empowerment initiatives and critical outcome measures, including work engagement, innovative output, and task performance. Contemporary human resource

strategies, particularly competency-building programs, have a notable positive impact on both employee satisfaction and institutional loyalty (Sulistio & Darmastuti, 2022). The implementation of empowerment strategies demonstrates robust correlations with enhanced workforce satisfaction across multiple organizational dimensions, from individual employee experience to team dynamics and institutional culture, offering valuable opportunities to optimize workplace fulfillment. This strategic approach enhances the acquisition of critical competencies among both staff members and leadership teams, enabling independent operation aligned with organizational objectives (Sulistio & Darmastuti, 2024).

Contemporary organizational studies reveal that empowered personnel exhibit heightened commitment and drive, leading to measurable improvements in operational efficiency and output quality. Grounded in social exchange principles, when institutions demonstrate substantive investment in workforce development through empowerment initiatives, employees reciprocate through enhanced productivity and organizational loyalty. Complementary research using self-determination theory frameworks identifies empowerment as crucial for addressing fundamental psychological needs, including self-governance, capability development, and community integration (Alshemmari & Kuwait, 2023). This multidimensional organizational strategy provides workers with delegated authority and operational flexibility, facilitating informed decision-making that drives competitive advantage (Kanjanakan et al., 2023). Studies demonstrate empowerment's capacity to optimize human capital utilization, particularly in financial services and technological systems, through targeted interventions in personalized support, cognitive engagement, and leadership transparency (Magasi, 2021; Qatawneh, 2023).

Emerging evidence positions workforce empowerment as a critical determinant of innovation capabilities, serving as an intermediary mechanism between quality assurance practices and creative outcomes (Al-Sabi et al., 2023). The strategic deployment of empowerment measures positively correlates with enhanced cognitive and affective engagement, with cultural belief systems moderating these relationships in academic research contexts (Nwachukwu et al., 2021). Cross-cultural investigations in financial institutions reveal the combined impact of empowerment and emotional and cultural competencies on employee satisfaction metrics (Akhter et al., 2021). Organizational dynamics research identifies empowered decision-making structures and knowledge integration systems as key drivers of operational responsiveness through non-traditional performance channels (Ali, 2021). Multivariate analyses distinguish empowerment, moral climate, and psychological safety as pivotal determinants of workplace satisfaction, while identifying delegated authority and incentive systems as performance enhancers with interactive effects (Adnan et al., 2021; Ganji et al., 2020).

Clearly, employee empowerment plays a vital role in business management, yet unfortunately, no research related to independent thinking could be found within the last five years. Here is the hypothesis:

**H7:** Employee empowerment moderates the impact of employees' independent thinking ability on enterprise organizational performance

**Research Framework Diagram**

The research framework of this study draws on Hayes's models 5 and 6. It extends them to analyze the impact of moderating variables on the mediating effect, namely the so-called "moderated multiple mediating effect".

The research framework of this study believes that employees' independent thinking ability affects enterprise organizational performance through the mediating effects of organizational citizenship behavior and organizational innovation ability, and the moderating effect of employee empowerment. The framework proposes the following relationship:

Direct effect: Employees' independent thinking ability directly affects organizational citizenship behavior and organizational innovation ability, and organizational innovation ability directly affects enterprise organizational performance.

Mediating effect: Organizational citizenship behavior and organizational innovation ability play a mediating role between employees' independent thinking ability and enterprise management performance.

Moderating effect: Employee empowerment mediates the relationship between employees' independent thinking ability and enterprise management performance.

This conceptual framework can be visually represented as shown in Figure 1 below:

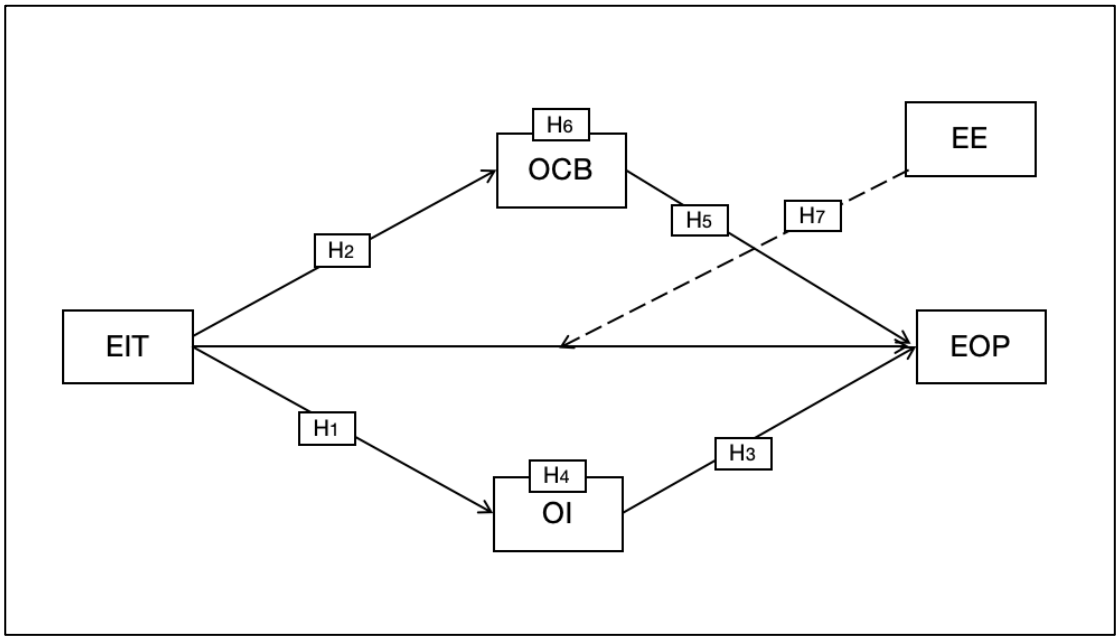


**Figure 1.** Research Framework

The variable and abbreviation in the above research framework are as follows:

**EIT** - Employee Independent Thinking
**OCB** - Organizational Citizenship Behavior
**OI** - Organizational Innovation
**EOP** - Enterprise Organizational Performance
**EE** - Employee Empowerment

## RESEARCH METHOD

### Research Design

The current paper uses the research strategy of quantitative analysis (Ghanad, 2023) to follow up and sort out employees' independent thought ability, enterprise organizational innovation ability, organizational citizenship behavior, employee empowerment and organizational performance. Quantitative research can maintain data reliability and the scientific nature of conclusions by using standardized measurement tools and statistical analysis techniques, thereby serving as a firm foundation upon which theoretical research and practical application can be based (Kotronoulas et al., 2023). Utilizing a quantitative approach to gather data from large samples makes the samples applicable across different industries and organizational contexts. Statistical software supported this study by managing complex data, identifying relationships among variables, supporting causal inference, and facilitating better interpretation of interaction mechanisms among different constructs.

**Research Locale and Data Collection**

This study focuses on small and medium-sized enterprises (SMEs) in Guangdong Province, China. As one of the most active regions in China's economy, the region has a large number of SMEs. In order to explore the relationship between independent thinking ability, organizational innovation ability, organizational citizenship behavior, employee empowerment and organizational performance of employees in SMEs in Guangdong Province, this study uses online questionnaires to collect data. This method is efficient and can quickly distribute and collect questionnaires, saving time and labor costs; at the same time, the anonymous design helps to reduce social expectation bias and enable participants to provide real information more objectively (Wardropper et al., 2021); in addition, the wide coverage of online questionnaires ensures that the sample covers enterprises of different industries and sizes, enhancing the diversity and representativeness of the data, thereby providing reliable data support for the study.

**Population and Sample**

The research focuses on employees working in Guangdong Province's small and medium enterprises (SMEs), which constitute a substantial portion of regional enterprises. This investigation employs a stratified random sampling approach, categorizing enterprises by workforce scale (10-350 employees) and randomly selecting subjects across manufacturing, service, and technology sectors to ensure sample diversity. We conducted online surveys targeting factory-region employees, yielding 427 usable responses from 500 participants with an 85.4% response rate. The participant pool includes varied demographics encompassing different genders, age groups, and organizational hierarchies. This strategically balanced sample structure enhances the validity and applicability of research findings while offering valuable insights for improving SME management.

**Method or Procedure**

To measure all constructs of interest in this study—employee independent thinking, employee OCB, organizational innovation, employee empowerment, and organizational performance—the researchers employed existing valid scales and adaptations of some scales. Below is where each scale was adapted and/or sourced from.

Our employee independent thinking scale was borrowed from Potter (2024) and Utah State University (2024), which has a broad range of items to measure different components of independent thinking, such as open-mindedness, criticality, nonconformity, the value and responsibility, confidence, religiosity, and questioning authority.

The organization citizenship behavior scale was taken from Sharma and Jain (2014). This scale measures the extent to which employees exhibit behaviors beyond what is required by the formal job definition for organizational success. It contains items based on altruism, conscientiousness, sportsmanship, courtesy, and civic virtues.

Adapted from Calik (2017), the organizational innovation scale is used. Scale measures the innovation capacity of the organizations in the context of their products, processes and management practices. Creativity, risk-taking, and learning orientation are evaluated in items.

Employee empowerment scale adopted from Qiao and Miniano (2022). The scale measures the extent to which employees perceive themselves to be empowered in their work situation. Items relate to perceived autonomy, perceived competence, sense of work meaning, and work influence.

Organizational performance, Miah (2018), scale was applied to organizational performance. The scale employs both financial and non-financial indicators for assessing an organization's overall performance. The financial indicators include profit and return on investment. The non-financial indicators include customer satisfaction and staff turnover.

The data collection relied on an online survey software with adapted scales for each construct and demographic questions to obtain survey respondents' characteristics. The survey was disseminated to participants via an online survey platform (e.g., WeChat), and reminders were sent to achieve a high response rate. The survey has been tested on a pilot sample to validate the questionnaire's clarity and reliability. With such verified scales, this research attempts to fully, accurately and relatively measure the main constructs, thus able to obtain strong analysis and provide meaningful conclusions concerning the associations between employee independent thinking ability, organizational innovation, organizational citizenship behavior, employee empowerment and organizational performance.

**Statistical Treatment**

This article conducted data management and statistical analysis using WPS and Jamovi software to ensure the authenticity of data processing and the stability of the statistical results. Firstly, we input the data through the WPS form to guarantee the authenticity and comprehensiveness of the data. The WPS form cleaned the data preliminarily, including detecting missing values, outliers, and duplicate records. Subsequently, descriptive statistical analysis was conducted with Jamovi soft- ware to compute the mean, median, standard deviation, minimum and maximum values of each variable to comprehend the basic features of the data; produce frequency distribution tables for each categorical variable and scrutinize their distribution; compute the correlation coefficients (El-Hashash & Shiekh, 2022) between the variables to ascertain the linear relation between the variables initially. Moreover, the reliability analysis was used to assess the internal consistency of each scale; EFA and CFA were used to assess the scale's structural validity (Hox, 2021). All of the analysis results are presented in tables or graphs, such as descriptive statistics, reliability and validity analyses, and indicators of mediation and moderation models.

**Instrument Reliability Test Results**

To ensure the reliability and validity of the scales, this study conducted reliability and validity tests for each scale. The reliability test examined the internal consistency of the scales based on Cronbach's α coefficient (Forero, 2023). The findings suggested that the α coefficients of all scales were above 0.9, implying the scales are highly reliable. Validity tests using exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) were conducted to assess the scales' structural validity. EFA results indicated that the factor structure of each scale was clear, and all factor loadings were larger than 0.80; the fit indexes for the CFA analysis achieved acceptable levels, such as RMSEA<0.081, CFI and TLI>0.90, and SRMR<0.01. These findings indicate the scales are dependable and capable of effectively measuring the respective constructs, thus serving well for our following analysis.

**FINDINGS AND DISCUSSION**

**Profile of Respondents Analysis**

The respondent sample numbered 427, with almost a balanced gender distribution: females (209, 48.95%) and males (218,51.05%). The working experience ranged from less than 3 years to over 10 years, with most respondents having 7 to 9 years of experience (26.93%). The age distribution shows that most of the respondents are aged from 36-45 years (26.93%), followed by those aged 26-35 years (24.36%). Regarding firm size, the sample is evenly distributed across sizes; there are no dominant size segments. The respondents worked in the public sector (22.95%) and private enterprises (77.05%), the private entities being more frequent. This multivariate sample provides a wide range of opinions and circumstances, facilitating the interpretation of the construct's relationships.

**Table 1.** Profile of Respondents of Sample

| Name | Options | Counts | SD | % of Total | Cumulative % |
|---|---|---|---|---|---|
| Gender | Female | 209 | 0.5 | 48.95 | 48.95 |
| | Male | 218 | | 51.05 | 100 |
| Years of working | 3 years and below | 103 | 1.117 | 24.12 | 24.12 |
| | 4-6 years | 99 | | 23.19 | 47.31 |
| | 7-9 years | 115 | | 26.93 | 74.24 |
| | 10 years and above | 110 | | 25.76 | 100 |
| Age | 25 years and below | 85 | 1.285 | 19.91 | 19.91 |
| | 26-35 years | 104 | | 24.36 | 44.26 |
| | 36-45 years | 115 | | 26.93 | 71.19 |
| | 46-55 years | 70 | | 16.39 | 87.59 |
| | 56 years and above | 53 | | 12.41 | 100 |
| Number of employees | 50 or less | 93 | 1.442 | 21.78 | 21.78 |
| | 51-100 | 87 | | 20.37 | 42.15 |
| | 101-150 | 80 | | 18.74 | 60.89 |
| | 151-250 | 80 | | 18.74 | 79.63 |
| | 251 or more | 87 | | 20.37 | 100 |
| Company | Public | 98 | 0.421 | 22.95 | 22.95 |
| | Private | 329 | | 77.05 | 100 |
| Total | | 427 | | 100 | 100 |

**Reliability and validity**

**Table 2.** Factor Loadings

| Factor | Indicator | Estimate | SE | Z | p |
|---|---|---|---|---|---|
| EIT | EIT | 0.8984 | 0.03074 | 29.22 | < .001 |
| OCB | OCB | 0.8104 | 0.02773 | 29.22 | < .001 |
| OI | OI | 0.8823 | 0.03019 | 29.22 | < .001 |
| EOP | EOP | 0.8792 | 0.03009 | 29.22 | < .001 |
| EE | EE | 0.8724 | 0.02985 | 29.22 | < .001 |

In this study, factor loading analysis (Table 2) showed that the factor loading (Franco-Martínez et al., 2023) of each latent factor was higher than 0.80, such as employee independent thinking ability (EIT) was 0.8984, organizational citizenship behavior (OCB) was 0.8104, organizational innovation ability (OI) was 0.8823, organizational performance (EOP) was 0.8792. Employee empowerment (EE) was 0.8724, indicating that the scale has good structural validity. The Z values for all factor loadings were greater than 1.96, and the p values were less than 0.001, further confirming the factor loadings' statistical significance. Model fit index analysis (Table 3) showed that the model fit the data very well, with CFI and TLI both equal to 1, SRMR less than 0.01, and RMSEA equal to 0, with a 90% confidence interval [0, 0]. These results show that the constructed model can well explain the relationship in the data, and the structure and assumptions of the model are strongly supported by the data.

**Table 3.** Fit Measures

| | | | | RMSEA 90% CI | |
|---|---|---|---|---|---|
| CFI | TLI | SRMR | RMSEA | Lower | Upper |
| 1 | 1 | < .001 | 0 | 0 | 0 |

**Table 4** The Measurement Result

| | | Number of items | Cronbach's α |
|---|---|---|---|
| Item | EIT | 20 | 0.8579 |

| | | Number of items | Cronbach's α |
|---|---|---|---|
| | OCB | 20 | 0.8586 |
| | OI | 18 | 0.8810 |
| | EE | 14 | 0.8734 |
| | EOP | 12 | 0.8127 |
| Scale | scale | 5 | 0.8861 |

In this research, the scale's internal consistency was measured through reliability analysis. The measurement results (Table 4) shows that the employee independent thinking ability (EIT) Cronbach's α coefficient is 0.8579, and the organizational citizenship behavior (OCB) Cronbach's α coefficient is 0.8586, the organizational innovation ability (OI) is 0.8810, the enterprise organizational performance (EOP) is 0.8127, the employee empowerment (EE) is 0.8734, the overall scale Cronbach's α coefficient is 0.8861. The extraordinarily high values of α reflect that the scale has good internal consistency and can be used to measure the corresponding variables, which should provide strong evidence for the reliability of research findings (Forero, 2023).

**Descriptive statistics analysis**

Table 5 presents descriptive statistics for five variables across 427 valid samples. Analysis reveals consistently elevated mean scores across all measured dimensions, reflecting strong employee performance in each assessed area. Specifically, the data show employee independent thinking ability (EIT) averaging 3.936 (SD=0.8995), organizational citizenship behavior (OCB) averaging 3.881 (SD=0.8114), and organizational innovation ability (OI) averaging 3.93 (SD=0.8833). Employee empowerment (EE) registered a mean of 3.944 (SD=0.8734), while employee organizational performance (EOP) scored 3.952 (SD=0.8802). These statistical findings suggest concentrated score distributions and high competence levels across all evaluated indicators.

**Table 5.** Descriptives statistics analysis

| | N | Mean | SE | SD | Variance |
|---|---|---|---|---|---|
| EIT | 427 | 3.936 | 0.04353 | 0.8995 | 0.8091 |
| OCB | 427 | 3.881 | 0.03927 | 0.8114 | 0.6583 |
| OI | 427 | 3.93 | 0.04275 | 0.8833 | 0.7803 |
| EE | 427 | 3.944 | 0.04227 | 0.8734 | 0.7629 |
| EOP | 427 | 3.952 | 0.0426 | 0.8802 | 0.7748 |

**Correlation analysis**

By Table 6, the result of Correlation analysis demonstrates that there is a strong positive relationship between employee independent thinking ability (EIT) and the 5 constructs organizational citizenship behavior (OCB), organizational innovation ability (OI), organizational performance (EOP) and employee empowerment (EE) with correlation coefficient ranging from 0.8621 to 0.7415 and p values all less than 0.001. This shows that these constructs are highly correlated and mutually reinforcing. More specifically, the corresponding correlation coefficients of EIT with OCB, OI, EOP and EE are 0.8142, 0.7974, 0.7415 and 0.7630, respectively; the corresponding correlation coefficients of OCB with OI, EOP and EE are 0.8341, 0.7575 and 0.7964, respectively; the corresponding correlation coefficients of OI with EOP and EE are 0.8101 and 0.8531, respectively; the corresponding correlation coefficient of EOP with EE is 0.8621. From these results, we can see not only that employees' independent thinking ability positively influences individual work performance (Kelty et al., 2023; LI, 2022), but also has an important promoting effect on organizational performance and organizational innovation (Krushkov & Zayakova-Krushkova, 2024). Meanwhile, a high positive linkage between employee empowerment(EE) and

organizational performance (EOP) further suggests that empowerment plays a significant role in better organizational performance (Alshemmari & Kuwait, 2023; Ali et al., 2025).

**Table 6.** Correlation Matrix

| | EIT | OCB | OI | EE | EOP |
|---|---|---|---|---|---|
| EIT | — | | | | |
| OCB | 0.8142*** | — | | | |
| OI | 0.7974*** | 0.8341*** | — | | |
| EE | 0.7630*** | 0.7964*** | 0.8531*** | — | |
| EOP | 0.7415*** | 0.7575*** | 0.8101*** | 0.8621*** | — |

Note. * p < .05, ** p < .01, *** p < .001

**Regression analysis of EIT, OI, & OCB**

As shown in the regression results in Tables 7 and 8, the independent thinking ability of employees (EIT) has a considerable positive effect on organizational innovation ability (OI) and organizational citizenship behaviour (OCB), respectively. Precisely, for organizational innovation ability (OI), the regression coefficient of EIT is 0.9719, which implies that OI will increase 0.9719 units for each unit increase in EIT, and this impact is statistically significant (p<0.0001). Likewise, with respect to organizational citizenship behavior (OCB), the regression coefficient for EIT is 0.8944, indicating that for each unit increase in EIT, the predicted value of OCB increases by 0.8944 units, and this relation is also statistically significant (p<0.0001). These results strengthen the central role played by employees' individual thinking ability in catalyzing organizational innovation and improving employees' positive behavior (Aggarwal, et al., 2024; Pavlenchyk et al., 2023). The two results from the analysis support the hypotheses H1 and H2.

**Table 7.** Regression analysis of OI & EIT

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | 0.1045 | 0.027483 | 3.802 | 0.0002 |
| EIT | 0.9719 | 0.006808 | 142.768 | < .0001 |

**Table 8.** Regression analysis of OCB & EIT

| Predictor | Estimate | SE | t | p |
|---|---|---|---|---|
| Intercept | 0.3612 | 0.022909 | 15.77 | < .0001 |
| EIT | 0.8944 | 0.005675 | 157.62 | < .0001 |

**Regression analysis of OI、OCB & EOP**

Based on the results of Table 9 by the regression analysis, organizational citizenship behavior (OCB) (Casu et al., 2021; Liao et al., 2022) and organizational innovation (OI)(Fan et al., 2021; Krushkov & Zayakova-Krushkova 2024) have significant positive effects on organizational performance (EOP). The regression coefficient of the former is 1.0564, the standard error of the former is 0.01198, the t value of the latter is 88.155, and the p value of the latter is less than 0.0001, indicating that OCB is a significant positive predictor of EOP. Same with OI, whose regression coefficient is 0.9732, standard error is 0.0104, t value is 93.569, and p value is less than 0.0001, indicating that OI is also a significantly positive driver of EOP. The statistical results indicate that OCB and OI are highly significant factors in driving organizational performance improvement (EOP). And the driving effect is statistically significant (Casu et al., 2021; Fan et al., 2021; Liao et al., 2022). The analysis results confirm H3 and H5.

**Table 9.** Regression analysis of OI、OCB & EOP

| Predictor | | Estimate | SE | t | p |
|---|---|---|---|---|---|
| OCB | Intercept | -0.1481 | 0.04751 | -3.118 | 0.0019 |
| | | 1.0564 | 0.01198 | 88.155 | < .0001 |
| OI | Intercept | 0.1277 | 0.04189 | 3.049 | 0.0024 |
| | | 0.9732 | 0.0104 | 93.569 | < .0001 |

**Mediation effect analysis**

**Table 10.** Indirect and Total Effects

| | | | | 95% C.I. (a) | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** | **p** |
| Indirect | EIT ⇒ OCB ⇒ EOP | 0.5963 | 0.063506 | 0.4652 | 0.7154 | 0.6094 | 9.39 | < .0001 |
| Component | EIT ⇒ OCB | 0.8944 | 0.005529 | 0.8835 | 0.9053 | 0.9916 | 161.76 | < .0001 |
| | OCB ⇒ EOP | 0.6667 | 0.070666 | 0.5207 | 0.7996 | 0.6146 | 9.435 | < .0001 |
| Direct | EIT ⇒ EOP | 0.3545 | 0.057064 | 0.2447 | 0.4692 | 0.3622 | 6.212 | < .0001 |
| Total | EIT ⇒ EOP | 0.9508 | 0.018088 | 0.9087 | 0.9786 | 0.9716 | 52.563 | < .0001 |

Note. Confidence intervals computed with method: Bootstrap percentiles

Note. Betas are completely standardized effect sizes

The results of the mediation analysis (Tables 10 & 11) indicate that employee independent thinking ability (EIT) has a significant positive effect on organizational performance (EOP). Its effect through the mediation of organizational citizenship behavior (OCB) (Aggarwal, et al., 2024) and organizational innovation (OI) (Arhin & Cobblah, 2024) is partially passed. Specifically, EIT having a significant direct effect on EOP (β=0.3622, p<0.0001) indicates that EIT has a direct significant effect on EOP. Moreover, the indirect effect of EIT through OCB on EOP (β=0.6094, p<0.0001) and the indirect effect of EOP through OI (β=0.7246, p<0.0001) are also significant, suggesting that OCB and OI partially mediate the relationship between EIT and EOP. Analysis of the total effect indicated that EIT has a significant total effect on EOP (β=0.9716, p<0.0001), once again demonstrating that EIT has an overall effect on EOP. The findings above clearly indicate that employees' independent thinking ability plays a positive role in enhancing organizational performance (Krushkov & Zayakova-Krushkova, 2024) through organizational citizenship behavior and organizational innovation (Arhin & Cobblah, 2024) as mediators. The model supported H4 and H6.

**Table 11.** Indirect and Total Effects

| | | | | **95% C.I. (a)** | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type** | **Effect** | **Estimate** | **SE** | **Lower** | **Upper** | **β** | **z** | **p** |
| Indirect | EIT ⇒ OI ⇒ EOP | 0.7091 | 0.068103 | 0.5589 | 0.8271 | 0.7246 | 10.413 | < .0001 |
| Component | EIT ⇒ OI | 0.9719 | 0.006838 | 0.9587 | 0.9851 | 0.9897 | 142.13 | < .0001 |
| | OI ⇒ EOP | 0.7296 | 0.070211 | 0.5747 | 0.8508 | 0.7322 | 10.392 | < .0001 |
| Direct | EIT ⇒ EOP | 0.2417 | 0.058274 | 0.1356 | 0.3657 | 0.247 | 4.147 | < .0001 |
| Total | EIT ⇒ EOP | 0.9508 | 0.018122 | 0.9093 | 0.9792 | 0.9716 | 52.465 | < .0001 |

Note. Confidence intervals computed with method: Bootstrap percentiles

Note. Betas are completely standardized effect sizes

**Moderation effect**

Table 12 presents the results of the moderation effect analysis. Employee empowerment (EE) does not have a meaningful moderating effect on the relationship of employee independent thinking ability (EIT) with organizational performance (EOP). More particularly, EIT has a significant positive effect on organizational performance (EOP) (β = 0.058175, p < 0.0001), and

therefore, employees' independent thinking ability has a direct positive effect on organizational performance (Kelty et al., 2023; LI, 2022). Similarly, EE also significantly positively influences EOP (β=0.939684, p<0.0001), which implies that employee empowerment has a direct positive influence on EOP (Ali et al., 2025; Tampi et al., 2022). However, the regression coefficient for the interaction term (EIT ✻ EE) is insignificant (β = -0.002675, p = 0.6711), which implies that EE cannot significantly modify the influence of EIT on EOP. It may imply that, in the present sample, the level change in employee empowerment has a minor impact on the influence of employees' independent thinking ability on organizational performance. The analysis outcomes reject hypothesis H7.

**Table 12.** Moderation effect Analysis

| | Estimate | SE | Z | p |
|---|---|---|---|---|
| EIT | 0.058175 | 0.009881 | 5.8876 | < .0001 |
| EE | 0.939684 | 0.005247 | 179.0874 | < .0001 |
| EIT ✻ EE | -0.002675 | 0.006299 | -0.4246 | 0.6711 |

**Discussion Summary**

The descriptive results (Table 1 and Table 5) of 427 staff of Guangdong SMEs indicate that the gender proportion is reasonable (48.95% women, 51.05% men), the age is middle-aged (26–45 years old: 51.29%), the working years are fairly proportioned, and the enterprise size embraces 10–350 people. These demographic features denote a fair sample. The scale reliability (Cronbach's α > 0.886), the fit indexes are satisfactory, and the model validity (CFI = TLI = 1, RMSEA = 0) is good. Thus, it can be assumed that the measurement instruments employed in this paper are both internally consistent and valid structures (Forero, 2023; Franco-Martínez et al., 2023). That level of reliability and validity of the measure is critical, especially when we are interested in the results of employee-level constructs such as independent thinking, empowerment, and performance in OB research (Alshemmari & Kuwait, 2023; Ali et al., 2025).

The regression (Table 7) shows that EIT → OI (β = 0.972, p < .001). (LI, 2022) argues that "the essence of scientific innovation is the process of independent thinking," which is free from any fixed algorithm and centers on continuous problem-posing and problem-solving. Krushkov and Zayakova-Krushkova(2024) further stress that critical thinking and creativity are "the core drivers of innovation." Hence, when employees think independently, they are more likely to break conventions and generate new ideas, directly elevating organizational innovation.

Table 8 shows that EIT → OCB (β = 0.894, p < .001) is significant. Aggarwal et al.(2024) note that employees are "the only proactive resource capable of independent thought"; when this capacity is unleashed, employees are more inclined to take initiative, help colleagues, and protect customers—classic forms of OCB. Manaf et al. (2022) add that critical thinking "embodies perfect thinking aligned with a particular mode of thought," prompting employees to engage in voluntary actions beyond their formal roles.

Table 9 shows that OI → EOP (β = 0.973, p < .001) is significant. Fan et al. (2021), based on the resource-based view, argue that innovation "is a key resource for superior performance". Krushkov and Zayakova-Krushkova (2024) similarly believe that systematic innovation is "at the center of long-term competitiveness", which is especially important for SMEs. Innovative outputs of new products, processes, or markets quickly turn into a firm's superior performance.

Table 9 shows OCB → EOP (β = 1.056, p < .001) is significant. A meta-analysis reported by Liao et al. (2022) shows that OCB yields "positive performance outcomes at both individual and organizational levels." Casu et al. (2021) find that OCB partially mediates the job-satisfaction–task-performance link and exerts a direct positive effect on performance. For resource-constrained

SMEs, employees' spontaneous cooperation, mutual assistance, and extra-role efforts reduce transaction costs and raise operational efficiency, thereby improving overall performance.

The mediation effect test (Table 10– 11) detected two positive paths: EIT → OI→ EOP: indirect effect β = 0.710 (95% CI [0.559, 0.827]) that makes acceptable H4; Li (2022) underlines that science breakthrough stems from independent thinking; Krushkov & ZayakovaKrushkova (2024) further argue that is from where innovation that spur competitiveness stems; EIT → OCB → EOP: indirect effect β = 0.596 (95% CI [0.465, 0.715]) that makes acceptable H6. Aggarwal et al.(2024) noted that independent employees are the proactive resources and engage extra-role activities willingly. These OCBs reliably boost performance in SMEs (Liao et al., 2022). In both pathways, the findings of partial mediation are also presented here, as the direct path remained significant (EIT→EOP: β = 0.362 and 0.247, p < .001). It indicates that OI and OCB jointly comprise the transmission channel from "cognition-behavior-performance".

Even though employee independent thinking (EIT) has a main effect on performance (β = 0.940, p < .001) and the interaction term (EE × EIT) is also non-significant (β = −0.003, p = .671), which indicates that the "level of empowerment" does not strengthen nor diminish the EIT–performance relationship; H7 is, hence, rejected. This is in line with Alshemmari and Kuwait (2023), who found empowerment acts mostly as antecedents rather than moderators, and Kanjanakan et al. (2023), who found that empowerment inequality's moderating effects are limited at the individual level. SMEs should instead regard employee empowerment as a necessary condition of independent thinking, rather than as another lever to make the effect stronger.

**Summary of Hypothesis Tests**

Table 13 below lists all the hypothesis test results.

**Table 13.** Summary of Hypothesis Tests

| | Hypothesis | Result |
|---|---|---|
| **H1** | Employees' independent thinking ability has a significant positive impact on organizational innovation | Accepted |
| **H2** | Employees' independent thinking ability has a significant positive impact on organizational citizenship behavior | Accepted |
| **H3** | Organizational innovation capability has a significant positive impact on the organizational performance of small and medium-sized enterprises | Accepted |
| **H4** | Organizational innovation ability has a significant mediating effect between employees' independent thinking ability and enterprise organizational performance | Accepted |
| **H5** | Organizational citizenship behavior has a significant positive impact on the organizational performance of small and medium-sized enterprises。 | Accepted |
| **H6** | Organizational citizenship behavior has a significant mediating effect between employees' independent thinking ability and enterprise organizational performance. | Accepted |
| **H7** | Employee empowerment moderates the impact of employees' independent thinking ability on enterprise organizational performance | Rejected |

**CONCLUSIONS**

In summary, this study uses 427 employees of small and medium-sized enterprises in Guangdong Province as a sample to systematically verify the complete mechanism by which employee independent thinking ability (EIT) affects enterprise organizational performance (EOP) and to evaluate the moderating effect of employee empowerment (EE). The main conclusions are as follows:

This study constructed a transmission framework of "EIT → OI/OCB → EOP", proving that

SMEs can systematically improve their competitiveness by cultivating employees' independent thinking ability, supplemented by innovation incentives and citizen behavior guidance. In the future, vertical or cross-industry designs can be adopted to clarify the boundary conditions of empowerment scenarios further.

This study is the first to place employee independent thinking ability (EIT) and enterprise organizational performance (EOP) in the "cognition-behavior-performance" integration framework, confirming that EIT not only directly improves EOP, but also plays a dual partial mediating role through organizational innovation (OI) and organizational citizenship behavior (OCB), thus filling the gap in the connection between the creativity component theory and the dynamic capability theory in the context of small and medium-sized enterprises. In practice, enterprises do not need to invest a lot of resources, but only need to strengthen their competitiveness through training and incentives through the "independent thinking → innovation/citizenship behavior → performance" link; at the same time, this study clarifies the failure of the moderating effect of employee empowerment in high-empowerment samples, providing a benchmark for subsequent contextual comparison studies.

This paper empirically verifies the positive effect of employees' independent thinking ability on enterprise competitiveness and finds the mediating effect of organizational innovation and organizational citizenship behavior. The research results indicate that employees' independent thinking ability plays an important role in enhancing the enterprise's competitiveness. By cultivating employees' independent thinking, organizations can maximize innovation and organizational citizenship behavior, and reasonable empowerment enables enterprises to compete in the market and realize sustainable development.

## LIMITATION & FURTHER RESEARCH

Although this study has achieved certain results, it still has some limitations. Future research can be expanded in the following areas: First, the relationship between employees' independent thinking ability, other organizational behaviors, and performance indicators, such as job satisfaction and organizational commitment, can be further explored. Secondly, it is possible to examine whether there are differences in the mechanisms underlying independent thinking among cultural employees across industries and backgrounds. Third, it is possible to further study whether there are differences in the impact of individual differences in the independent thinking ability of enterprise team employees on enterprise performance indicators. In addition, future research can also use a longitudinal research design to deeply explore the impact mechanism of employees' independent thinking ability on the long-term competitiveness of enterprises.

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