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ENTREPRENEURIAL LEADERSHIP AND INTELLECTUAL CAPITAL: CATALYSTS FOR SME PERFORMANCE IN NORTHERN THAILAND

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Abstract

Small and medium-sized enterprises (SMEs) face critical structural constraints requiring dynamic organizational capabilities to sustain competitiveness in emerging economies. This study investigates the impact of entrepreneurial leadership on SME performance, specifically examining the mediating mechanism of intellectual capital, encompassing human, structural, and relational dimensions. Using cross-sectional survey data from 105 executives and 1,001 employees in SMEs in Upper Northern Thailand, the research employs structural equation modeling (SEM) to test the hypothesized pathways. The empirical findings reveal that entrepreneurial leadership exerts a significant positive influence on organizational performance, both directly and indirectly. Intellectual capital serves as a substantive partial mediator, demonstrating that leaders who effectively cultivate employee competencies, institutionalize knowledge systems, and foster stakeholder networks significantly amplify firm-level outcomes. These results extend the resource-based and knowledge-based views, offering actionable insights for strategic management. Fostering entrepreneurial leadership and developing intellectual capital are highly imperative for policymakers and managers seeking to build robust organizational resilience and sustainable economic growth in competitive modern markets.

Keywords: Entrepreneurial Leadership, Intellectual Capital, Organizational Resilience, Structural Equation Modeling, SME Competitiveness

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Introduction

Small and medium-sized enterprises (SMEs) are widely recognized as critical engines of economic growth, employment generation, and sustainable development worldwide. In Thailand, SMEs constitute a structural pillar of the national economy, accounting for a substantial share of employment and gross domestic product (GDP). According to the Office of Small and Medium Enterprises Promotion (2021), more than 3.1 million SMEs operate across agriculture, manufacturing, trade, and service sectors, contributing approximately 69-71% of total employment and 31.8-35.3% of GDP between 2015 and 2019. These figures underscore the systemic importance of SMEs to Thailand's economic resilience and social stability.

In response to this economic significance, the Thai government has implemented several strategic initiatives to strengthen SME competitiveness. The Fourth SME Promotion Plan (2017-2021) aimed to increase SMEs' contribution to GDP to 50% (Office of Small and Medium Enterprises Promotion, 2017), while the national "Thailand 4.0" development agenda promotes a transition toward a value-based and innovation-driven economy in which SMEs play a transformative role. Despite these policy initiatives, structural constraints continue to hinder SME growth and international competitiveness. Many SMEs face limitations in managerial capability, strategic planning, and entrepreneurial orientation (Organisation for Economic Co-operation and Development, 2019). Furthermore, technology adoption and the integration of innovation remain uneven, limiting productivity and digital transformation (Khalique et al., 2018). Export participation is also relatively limited and often concentrated in low-technology sectors (Office of Small and Medium Enterprises Promotion, 2021). SMEs frequently encounter additional challenges in attracting skilled human resources, institutionalizing effective knowledge management systems, and developing strong interorganizational networks (Xu & Li, 2019).

These challenges are particularly evident in regional economic contexts such as Upper Northern Thailand, where many enterprises operate with restricted access to capital, advanced infrastructure, and managerial training. At the same time, the region presents distinctive economic opportunities, including cross-border trade, cultural industries, and expanding domestic tourism markets. Consequently, understanding how SMEs mobilize internal organizational capabilities to overcome structural limitations and convert regional opportunities into sustainable competitive advantages has become both a theoretical and practical concern. Within management research, SME performance has been widely examined through several complementary theoretical perspectives, including the resource-based view (RBV), the knowledge-based view (KBV), and social capital theory. The RBV proposes that sustained competitive advantage arises from valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Because SMEs typically possess limited tangible assets, intangible resources such as leadership competence and intellectual capital become particularly significant strategic assets. Extending this perspective, the KBV conceptualizes knowledge as the most strategically important organizational resource (Grant, 1996), emphasizing that firms capable of generating, integrating, and applying knowledge effectively are better positioned to innovate and compete. In addition, social capital theory highlights the role of networks, trust, and relational embeddedness in shaping organizational outcomes and facilitating knowledge exchange (Nahapiet & Ghoshal, 1998). Within this theoretical framework, intellectual capital (IC) has emerged as a central construct explaining organizational competitiveness. Intellectual capital is commonly conceptualized as comprising human capital, structural capital, and relational capital (Bontis, 1998; Subramaniam & Youndt, 2005). Human capital represents employees' knowledge, competencies, and creative capacities that support innovation and problem solving (Bontis et al., 2000). Structural capital refers to organizational processes, routines, and institutionalized knowledge systems that facilitate coordination and knowledge

diffusion (Dzenopoljac et al., 2017). Relational capital reflects the quality of relationships with stakeholders, including customers, partners, and external networks, which enhance trust, legitimacy, and market access (Cleary & Quinn, 2016). Empirical studies consistently demonstrate that intellectual capital positively influences firm performance and innovation outcomes (Cabrita & Bontis, 2008; Sardo et al., 2018). However, intellectual capital does not emerge automatically; it must be cultivated and strategically leveraged through effective leadership.

Leadership, therefore, represents a crucial organizational capability that shapes SME performance. Previous studies indicate that leadership behaviors significantly influence organizational culture, employee engagement, strategic orientation, and overall performance outcomes (Engelen et al., 2015; Zhu et al., 2016). Among various leadership approaches, entrepreneurial leadership has received increasing scholarly attention, particularly in dynamic and uncertain business environments. Entrepreneurial leadership is characterized by opportunity recognition, proactive strategic behavior, calculated risk-taking, innovation orientation, and effective resource mobilization (Renko et al., 2015). These characteristics are particularly relevant for SMEs, which frequently operate in volatile markets and must continuously adapt to environmental change.

Although prior research has examined entrepreneurial leadership and intellectual capital as independent predictors of firm performance, relatively limited attention has been devoted to their integrated relationship, particularly within regional SME contexts in Southeast Asia. Existing studies often treat leadership and intellectual capital as parallel determinants of performance, rather than examining how entrepreneurial leadership activates intellectual capital as a mediating mechanism to enhance organizational outcomes. Furthermore, empirical evidence from Thailand—especially from Upper Northern provinces—remains limited. To address this research gap, the present study investigates the relationship between entrepreneurial leadership, intellectual capital, and SME performance in Upper Northern Thailand. Specifically, this study aims to examine the direct effect of entrepreneurial leadership on the organizational performance of SMEs, assess the direct effects of intellectual capital components including human capital, structural capital, and relational capital on SME performance, and evaluate the mediating role of intellectual capital in the relationship between entrepreneurial leadership and organizational performance. By examining both direct and indirect relationships among these constructs, this research provides a more comprehensive understanding of how leadership capabilities activate knowledge-based resources to enhance SME competitiveness. Through this integrated analytical framework, the study extends the resource-based and knowledge-based views by conceptualizing entrepreneurial leadership as a dynamic capability that mobilizes intellectual capital to strengthen organizational performance. The findings are expected to provide theoretical insights for management research and practical implications for policymakers and SME managers seeking to enhance competitiveness and sustainable growth in regional economic contexts.

Literature Reviews

Entrepreneurial Leadership and SME Performance

The performance of small and medium-sized enterprises (SMEs) has increasingly been conceptualized as the outcome of interactions between leadership capabilities and strategic resource configurations. From the resource-based view (RBV), sustained competitive advantage arises from the effective mobilization of valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). For SMEs, which frequently operate under financial, technological, and structural constraints, intangible capabilities are particularly important. Among these capabilities, entrepreneurial leadership represents a strategic orientation that enables firms to navigate uncertainty and reconfigure limited resources to exploit emerging

opportunities. Such leaders are characterized by recognizing opportunities, proactivity, innovativeness, and calculated risk-taking that facilitate adaptive decision-making and strategic renewal (Renko et al., 2015). Empirical studies indicate that this leadership style enhances innovation capacity, strategic flexibility, and competitive positioning in resource-constrained environments (Engelen et al., 2015). Furthermore, managerial characteristics significantly influence organizational performance by shaping decision-making and resource allocation (Garcés-Galdeano & García-Olaverri, 2019). Collectively, these findings position entrepreneurial leadership as a dynamic capability that shapes how SMEs configure and deploy internal resources to achieve competitive advantage.

Intellectual Capital as a Knowledge-Based Resource

Parallel to leadership capability, intellectual capital (IC) has emerged as a multidimensional determinant of firm performance. Rooted in the knowledge-based view (KBV), which conceptualizes knowledge as the firm's most strategically significant resource (Grant, 1996), intellectual capital refers to intangible assets embedded within individuals, organizational systems, and relational networks.

Intellectual capital is commonly conceptualized as a multidimensional construct comprising human capital, structural capital, and relational capital (Bontis, 1998; Subramaniam & Youndt, 2005). Specifically, human capital represents employees' knowledge, competencies, skills, and creative abilities that support innovation and problem-solving (Bontis et al., 2000; Chen et al., 2005). Structural capital refers to codified routines, information systems, organizational processes, and supportive cultural norms that facilitate coordination, knowledge retention, and operational efficiency (Dzenopoljac et al., 2017). Furthermore, relational capital reflects the strength and quality of relationships with stakeholders, which enhance legitimacy, trust, and market access (Cleary & Quinn, 2016).

Empirical research consistently reports positive relationships between intellectual capital and firm performance, particularly in SMEs where knowledge-based resources compensate for limited tangible assets (Cabrita & Bontis, 2008; Sardo et al., 2018). From a social capital perspective, relational embeddedness further strengthens organizational performance by facilitating knowledge exchange and collaborative innovation (Nahapiet & Ghoshal, 1998).

However, much of the existing literature conceptualizes intellectual capital primarily as an independent predictor of performance, rather than as a resource that is activated and strategically mobilized through leadership behavior.

Entrepreneurial Leadership and the Development of Intellectual Capital

Recent studies have begun to examine the interaction between entrepreneurial leadership and intellectual capital, suggesting that leadership may catalyze the development and mobilization of knowledge-based resources. Specifically, entrepreneurial leaders who encourage experimentation, learning orientation, and knowledge sharing contribute significantly to the development of human and structural capital (Leesmidt & Jarunratanakul, 2022). By establishing supportive organizational cultures and formal knowledge management systems, these leaders institutionalize innovation processes within organizational structures. Furthermore, ethical and benevolent leadership behaviors strengthen relational capital by reinforcing trust, collaboration, and long-term stakeholder commitment (Leesmidt & Jarunratanakul, 2022). Through these mechanisms, entrepreneurial leadership not only shapes strategic direction and the exploitation of opportunities but also indirectly enhances firm performance by comprehensively developing intellectual capital.

Direct and Indirect Effects on Firm Performance

Empirical evidence suggests that entrepreneurial leadership may influence organizational performance through both direct and indirect pathways. Direct effects occur through strategic orientation, opportunity recognition, and resource orchestration, enabling firms to respond effectively to environmental changes (Renko et al., 2015). Indirect effects occur when

leadership enhances intellectual capital, which subsequently improves innovation capacity, operational efficiency, and customer satisfaction. For example, strong human capital combined with proactive leadership improves organizational responsiveness to opportunities for innovation. Similarly, well-developed structural and relational capital strengthen marketing effectiveness, operational coordination, and stakeholder loyalty (Rehman et al., 2022). However, these relationships are often context-dependent, with sectoral and regional characteristics influencing the magnitude of these effects (Xu & Li, 2019). Consequently, in emerging economies characterized by institutional heterogeneity and uneven technological development, this leadership-knowledge nexus becomes particularly important for firm competitiveness.

Research Gap and Conceptual Framework

Within Upper Northern Thailand, SMEs continue to face structural challenges related to managerial capability, workforce quality, digital infrastructure, and international competitiveness (Office of Small and Medium Enterprises Promotion, 2021). Although national policies promote innovation-driven economic growth, regional disparities may influence how entrepreneurial leadership translates into organizational outcomes. Despite growing academic interest in entrepreneurial leadership and intellectual capital, relatively few empirical studies have examined their relationship in an integrated manner within this regional context. Most existing research investigates these constructs separately, leaving a limited understanding of how leadership activates intellectual capital as a mechanism to enhance SME performance. To address this gap, the present study conceptualizes intellectual capital as a multidimensional mediator linking entrepreneurial leadership to SME performance. As illustrated in Figure 1, entrepreneurial leadership is modeled as an exogenous capability influencing human capital, structural capital, and relational capital. These components subsequently mediate the effects of leadership on organizational outcomes, including financial performance, marketing effectiveness, and customer satisfaction. By explicitly modeling both direct and indirect relationships, this framework provides a more integrated and mechanism-based explanation of SME competitiveness in an emerging-economy context.

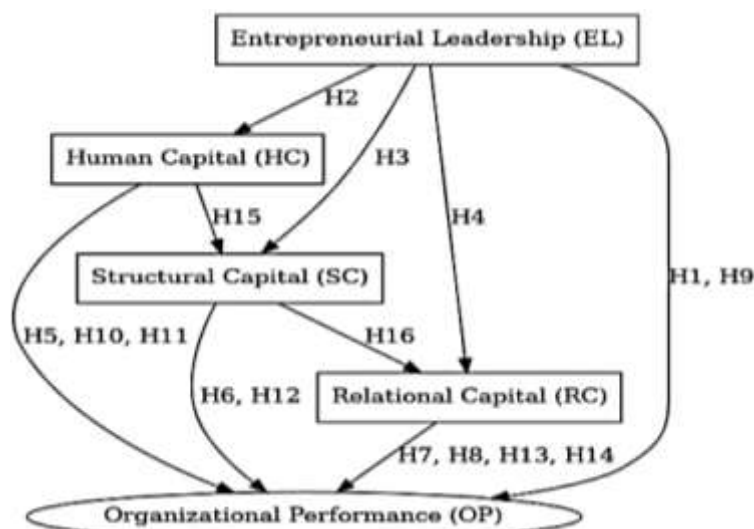


Figure 1 Conceptual Framework

Research Methods

Research Design and Conceptual Specification

This study employs a quantitative, cross-sectional research design to examine the direct and indirect effects of entrepreneurial leadership on the performance of SMEs in Upper Northern

Thailand. Within this framework, entrepreneurial leadership is defined as the ability to recognize opportunities, mobilize resources, take calculated risks, and foster innovation (Gupta et al., 2004; Renko et al., 2015) and is specified as an exogenous latent construct. Conversely, intellectual capital—grounded in the knowledge-based view of the firm (Grant, 1996) and operationalized through human, structural, and relational dimensions (Bontis, 1998; Subramaniam & Youndt, 2005)—is modeled alongside organizational performance as endogenous latent constructs. Organizational performance encompasses both financial and non-financial dimensions, including marketing effectiveness and customer satisfaction. To evaluate these complex direct and indirect relationships, structural equation modeling (SEM) was employed to simultaneously estimate the model's measurement and structural components, enabling a rigorous examination of latent variable relationships while accounting for measurement error and complex mediation effects (Hair et al., 2018).

Population and Sampling Procedure

The target population comprises SMEs operating in the manufacturing sector across provinces in Upper Northern Thailand, a region characterized by relatively limited access to advanced technological infrastructure but strong relational networks that may facilitate the development of intellectual capital. With the organization serving as the unit of analysis, a structured questionnaire was distributed to 352 SMEs via a combination of mailed surveys and online platforms to enhance accessibility and response rates. A total of 105 usable firm-level responses were obtained, comprising 105 executive-level and 1,001 employee responses. This final sample size exceeds the minimum threshold commonly recommended for SEM analysis (Kline, 2005), ensuring adequate statistical power to estimate the model parameters. Furthermore, the response rate aligns with established benchmarks in organizational research (Baruch & Holtom, 2008; Ge et al., 2017), and systematic comparisons between early and late respondents revealed no statistically significant differences, thereby confirming the absence of non-response bias.

Measurement of Constructs

All constructs were measured using multi-item scales adapted from validated instruments in prior research, with responses recorded on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). Specifically, entrepreneurial leadership (EL) was measured using indicators that captured opportunity recognition, proactivity, innovation orientation, and risk-taking behaviors (Gupta et al., 2004; Renko et al., 2015). Intellectual capital was assessed across three dimensions: human capital (HC) reflecting employees' knowledge and learning capabilities (Bontis et al., 2000); structural capital (SC) indicating organizational routines and knowledge systems (Subramaniam & Youndt, 2005); and relational capital (RC) evaluating stakeholder trust and collaborative networks (Cleary & Quinn, 2016). Finally, organizational performance (OP) was operationalized using subjective comparative performance measures relative to competitors, which is a common approach in SME research where objective financial data may be limited.

To ensure instrument robustness, content validity was initially assessed using the Index of Item Objective Congruence (IOC) procedure (Lynn, 1986), followed by a pilot study involving 40 SMEs and 30 employees that confirmed the research instrument's clarity and reliability. Subsequently, internal consistency reliability was evaluated using Cronbach's alpha and composite reliability (CR), with all values exceeding the recommended threshold of .70 (Nunnally & Bernstein, 1994; Hair et al., 2018). Convergent validity was established through the average variance extracted ($AVE \geq .50$), while discriminant validity was rigorously examined using the Fornell-Larcker criterion.

Data Analysis and Mediation Testing

Data analysis proceeded systematically in several stages. First, descriptive statistics were computed to summarize the characteristics of respondents and participating firms. Second, confirmatory factor analysis (CFA) was conducted to validate the measurement model and

evaluate construct reliability and validity. Third, structural equation modeling (SEM) was utilized to test the hypothesized relationships and mediation effects among constructs. Model fit was assessed using multiple goodness-of-fit indices—including the Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), and Standardized Root Mean Square Residual (SRMR)—with acceptable fit determined by CFI and $TLI \geq .90$ and $RMSEA$ and $SRMR \leq .08$ (Hair et al., 2018). Finally, mediation effects were rigorously evaluated using bootstrapping procedures with 5,000 resamples to estimate indirect effects and generate bias-corrected confidence intervals. This comprehensive approach allows the decomposition of total effects into direct and indirect components, providing robust statistical inference regarding the mediating role of intellectual capital.

Common Method Bias and Robustness Checks

Because this study relies on self-reported survey data, both procedural and statistical remedies were implemented to mitigate potential common method bias (Podsakoff et al., 2003). Procedurally, respondent anonymity was ensured, and measurement items were psychologically separated within the questionnaire. Statistically, Harman's single-factor test and alternative confirmatory factor analysis (CFA) model comparisons were conducted, indicating that no single factor accounted for the majority of the variance, which suggests that common method variance did not substantially threaten the validity of the findings. Additionally, independent-samples t-tests were conducted to examine potential differences between firm sizes and export statuses; these analyses served as essential robustness checks rather than primary hypothesis tests, further validating the empirical framework.

Research Ethics

This study was conducted in accordance with established ethical standards for research involving human participants. Ethical approval was obtained from the Human Research Ethics Committee of Northern College prior to data collection (Approval No. NRED 0025/2568). Participants were provided with informed consent forms outlining the study's objectives, the voluntary nature of participation, confidentiality protections, and their right to withdraw at any time without penalty. All collected data were treated confidentially and used solely for academic research purposes.

Research Results

The final sample comprised 105 SMEs located in Upper Northern Thailand, including 54 small enterprises (51.43%) and 51 medium-sized enterprises (48.57%). Executive respondents were predominantly male (66.67%) and aged 41-50 (34.29%), with most holding at least a bachelor's degree (56.19%). Approximately half were firm founders (50.48%), while 40.95% represented second-generation successors, suggesting a mixture of entrepreneurial and inherited leadership structures. Among employee respondents ($n = 1,001$), the gender distribution was skewed toward females (64.84%), and nearly half reported organizational tenure of fewer than five years (49.45%), indicating moderate workforce dynamism. At the firm level, 43.81% of SMEs engaged in exporting activities. Competitive intensity was perceived as high by nearly half of respondents (49.52%). Notably, 93.33% of firms reported no layoffs during the COVID-19 pandemic, indicating relative organizational resilience.

Table 1 presents the descriptive statistics and Pearson correlations among the principal constructs.

Table 1 Descriptive Statistics and Correlations.

Variable	Mean	SD	1	2	3	4	5
1) Entrepreneurial Leadership (EL)	3.89	0.62	-				
2) Human Capital (HC)	3.95	0.58	.62**	-			
3) Structural Capital (SC)	3.81	0.60	.58**	.66**	-		
4) Relational Capital (RC)	4.02	0.55	.60**	.64**	.63**	-	
5) Organizational Performance (OP)	3.87	0.57	.65**	.68**	.61**	.69**	-

Note: **p < .01

All correlations were positive and statistically significant, providing preliminary support for the hypothesized relationships. The magnitudes suggest moderate-to-strong associations, particularly between relational capital and organizational performance ($r = .69$), indicating potential mediation pathways.

Confirmatory factor analysis (CFA) was conducted prior to structural estimation to assess reliability and validity.

Table 2 Measurement Model Reliability and Validity

Construct	Cronbach's α	CR	AVE
EL	0.90	0.91	0.63
HC	0.88	0.89	0.59
SC	0.86	0.87	0.56
RC	0.91	0.92	0.66
OP	0.89	0.90	0.60

All composite reliability (CR) values exceeded the recommended threshold of .70, and all average variance extracted (AVE) values surpassed .50, confirming convergent validity. Discriminant validity was verified using the Fornell-Larcker criterion. The measurement model demonstrated satisfactory fit: CFI = .93, TLI = .91, RMSEA = .056, SRMR = .049. These indices meet the recommended thresholds (CFI/TLI $\geq$.90; RMSEA/SRMR $\leq$.08), indicating adequate measurement model fit.

Following the validation of the measurement model, Structural Equation Modeling (SEM) was conducted to evaluate the hypothesized structural relationships. The overall structural model also yielded a satisfactory fit to the empirical data (CFI = .93, TLI = .91, RMSEA = .056, SRMR = .049), establishing a robust foundation for hypothesis testing. Table 3 presents the structural path coefficients.

Table 3 Structural Path Coefficients

Hypothesis	Path	β	SE	t	p	Result
H1	EL $\rightarrow$ OP	.32	.08	4.01	< .001	Supported
H2	EL $\rightarrow$ HC	.61	.07	8.72	< .001	Supported
H3	EL $\rightarrow$ SC	.55	.08	6.89	< .001	Supported
H4	EL $\rightarrow$ RC	.58	.07	7.96	< .001	Supported
H5	HC $\rightarrow$ OP	.29	.09	3.21	.001	Supported
H6	SC $\rightarrow$ OP	.21	.08	2.74	.006	Supported
H7	RC $\rightarrow$ OP	.33	.07	4.43	< .001	Supported

Note: β = Standardized path coefficient; SE = Standard error.

Entrepreneurial leadership exerted a significant direct effect on organizational performance ($\beta = .32$, $p < .001$), supporting H1. In addition, entrepreneurial leadership significantly influenced all three intellectual capital dimensions ($\beta = .55$ -.61, $p < .001$), supporting H2-H4. All

intellectual capital dimensions demonstrated significant positive effects on organizational performance, supporting H5-H7. The model explained substantial variance in key endogenous constructs: R^2 (HC) = .37, R^2 (SC) = .30, R^2 (RC) = .34, R^2 (OP) = .61. The structural model accounted for 61% of the variance in organizational performance, indicating strong explanatory power.

Table 4 Bootstrapped Indirect Effects

Indirect Path	Indirect Effect	95% CI	p	Mediation
EL → HC → OP	.18	[.10, .27]	< .001	Partial
EL → SC → OP	.12	[.05, .21]	.002	Partial
EL → RC → OP	.19	[.11, .29]	< .001	Partial

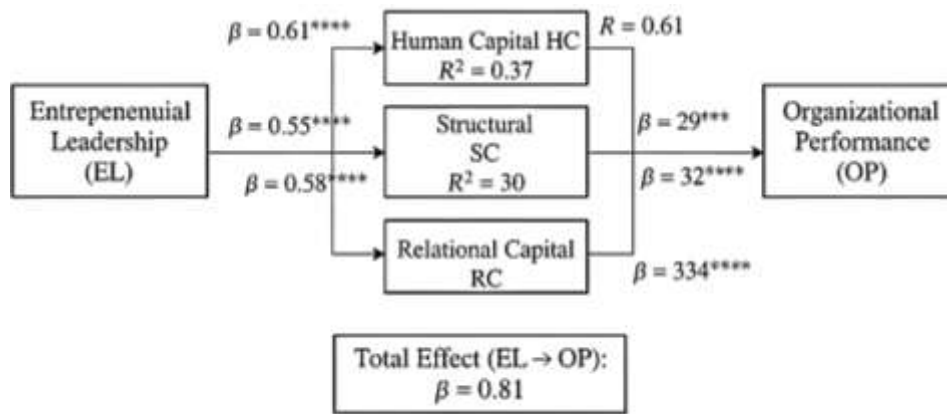
To evaluate the indirect effects, bootstrapping procedures with 5,000 resamples were utilized. As presented in Table 4, all indirect effects were statistically significant, as the confidence intervals excluded zero. Because the direct path (EL → OP) remained significant, mediation is classified as partial mediation. These findings confirm that intellectual capital serves as a transmission mechanism linking entrepreneurial leadership to SME performance.

Table 5 Independent-Samples t-Test Results.

Variable	Comparison	t	p	Cohen's d
EL	Small vs Medium	0.789	.432	0.15
OP	Small vs Medium	1.229	.222	0.19
EL	Export vs Non-export	-1.896	.061	0.29
OP	Export vs Non-export	-0.957	.341	0.14

Independent-samples t-tests were conducted as robustness checks to examine potential demographic variations. As indicated in Table 5, no statistically significant differences were detected ($p > .05$). Furthermore, the effect sizes were small ($d < .30$), indicating negligible practical differences across firm size and export status.

The structural equation modeling (SEM) results directly address the research objectives and provide strong empirical support for the proposed theoretical framework. Entrepreneurial leadership has a statistically significant and positive direct effect on SME performance, indicating that opportunity recognition, proactivity, and an innovation orientation contribute meaningfully to organizational outcomes. Intellectual capital comprising human, structural, and relational capital also demonstrates significant positive effects on organizational performance, confirming that knowledge-based resources are critical determinants of competitiveness and operational effectiveness. Mediation analysis further reveals that intellectual capital partially mediates the relationship between entrepreneurial leadership and SME performance. Although leadership retains a significant direct effect, a substantial portion of its influence is transmitted indirectly through the development of employee competencies, organizational systems, and relational networks. As illustrated in Figure 2, the integrated structural model demonstrates that entrepreneurial leadership enhances firm performance both directly and indirectly through intellectual capital, reinforcing the resource-based and knowledge-based perspectives of the firm.



Model Fit Indices: CFI = .93, TLI = .91, RMSEA = .056, SRMR = .049

Figure 2 Final structural model.

Conclusion and Discussion

This study advances scholarly understanding of how entrepreneurial leadership (EL) and intellectual capital (IC) jointly influence the performance of small and medium-sized enterprises (SMEs) within the regional political-economic context of Upper Northern Thailand. By integrating structural equation modeling (SEM) with bootstrapped mediation analysis, the study provides robust empirical support for the proposed conceptual framework. It contributes to theoretical and policy-oriented discussions at the intersection of strategic management, Asian political economy, and sustainability research.

Consistent with the resource-based view (RBV), entrepreneurial leadership emerges as a strategic capability that mobilizes valuable, rare, and inimitable intangible resources to generate sustained competitive advantage (Barney, 1991). The significant direct effect of entrepreneurial leadership on organizational performance confirms that leadership characterized by opportunity recognition, calculated risk-taking, and innovation orientation enhances both financial and non-financial performance outcomes. However, the mediation results demonstrate that intellectual capital comprising human capital, structural capital, and relational capital functions as the primary mechanism through which leadership translates into sustainable performance gains.

This finding aligns with the knowledge-based view (KBV), which conceptualizes firms as repositories of knowledge and emphasizes knowledge integration and coordination as fundamental sources of competitive advantage (Grant, 1996). In this context, entrepreneurial leadership operates not merely as a behavioral attribute but as a dynamic capability that orchestrates knowledge-based resources within organizations (Teece, 2007).

Importantly, the present study situates these relationships within the broader Asian political and institutional landscape. SMEs in Thailand operate within a governance environment shaped by state-led development strategies, industrial policy frameworks, and evolving regulatory institutions. National initiatives such as Thailand 4.0 reflect a policy-driven transition toward innovation-based economic growth and digital transformation. Nevertheless, the empirical findings suggest that macro-level policy ambitions alone do not automatically lead to improvements in firm-level performance. Instead, leadership-driven intellectual capital development plays a decisive role in translating policy environments into competitive advantage. This observation contributes significantly to Asian political economy scholarship by illustrating how micro-level organizational capabilities interact with macro-level institutional structures (Peng et al., 2008). Consequently, leadership-driven knowledge development may serve as a crucial mediating institutional mechanism that links national innovation policy directly to firm-level competitiveness.

The absence of statistically significant differences between small and medium enterprises, as well as between exporting and non-exporting firms, further enriches this political-economic interpretation. These findings suggest relative structural homogeneity within the regional SME ecosystem. Participation in export markets alone does not necessarily generate superior knowledge assets or leadership practices. From an institutional economics perspective, this may reflect path dependency and institutional constraints that limit firms' absorptive capacity (North, 1990). Without complementary investments in leadership capability and knowledge systems, exposure to global markets may not translate into sustained productivity gains. This observation aligns with prior research emphasizing that institutional quality and policy coherence influence how globalization affects firm-level performance (Peng et al., 2008).

From an ESG and sustainability perspective, the findings also carry significant implications. Intellectual capital development, particularly human and relational capital, aligns closely with environmental, social, and governance (ESG) dimensions. Investment in human capital strengthens workforce capabilities, learning capacity, and inclusive employment practices, contributing directly to Sustainable Development Goal (SDG) 8, which emphasizes decent work and economic growth (United Nations, 2015). Structural capital improvements enhance innovation systems, digital infrastructure, and organizational learning processes, thereby supporting SDG 9 on industry, innovation, and infrastructure. Meanwhile, relational capital strengthens stakeholder engagement, trust, and governance transparency, aligning with SDG 16 concerning strong institutions.

By empirically demonstrating that leadership-driven intellectual capital enhances organizational performance, this study highlights that sustainability and competitiveness are mutually reinforcing rather than competing objectives. Leadership capability thus serves as a governance mechanism that can strengthen both ESG and financial performance simultaneously.

The study also contributes theoretically by extending RBV and KBV perspectives into emerging market contexts characterized by institutional heterogeneity. While previous studies have frequently treated intellectual capital as an independent predictor of performance, this study empirically demonstrates that it is actively mobilized and amplified through entrepreneurial leadership behaviors. By modeling intellectual capital as a multidimensional mediator, the research clarifies the internal pathways linking leadership capability to organizational performance. Furthermore, within the framework of dynamic capabilities theory (Teece, 2007), entrepreneurial leadership can now be robustly understood as a sensing, seizing, and reconfiguring capability that fundamentally shapes the firm's knowledge architecture and strategic adaptability.

Practical Implications

The findings carry important implications for both policymakers and business leaders. At the policy level, government agencies and SME development institutions should prioritize leadership development programs that cultivate entrepreneurial competencies, digital transformation skills, and structured knowledge management systems. Rather than categorizing SMEs solely by firm size or export status, policy initiatives should focus on strengthening systemic intellectual capital across the broader SME ecosystem. Capacity-building initiatives such as leadership academies, digital transformation grants, and public-private innovation hubs could significantly enhance knowledge diffusion and absorptive capacity. In addition, governance reforms that support transparent regulatory processes, knowledge-sharing platforms, and innovation financing mechanisms would further strengthen the effectiveness of firm-level leadership initiatives.

At the managerial level, SME leaders should recognize that performance improvements depend not only on strategic orientation but also on the systematic integration of knowledge. Investments in employee training, digital infrastructure, and collaborative stakeholder

networks represent long-term strategic assets rather than short-term operational expenses. Leadership practices that encourage experimentation, collaborative learning, and cross-functional coordination can create reinforcing feedback loops among human, structural, and relational capital.

Limitations and Future Research

Several limitations should be acknowledged. First, the cross-sectional research design limits the ability to draw causal conclusions regarding the relationships among leadership, intellectual capital, and organizational performance. Future research employing longitudinal designs could provide deeper insights into the dynamic evolution of these relationships over time. Second, the reliance on self-reported survey measures may introduce perceptual bias, although statistical remedies were implemented to mitigate potential common method variance (Podsakoff et al., 2003). Future studies could incorporate objective financial indicators and secondary data sources to strengthen measurement robustness. Third, the study focuses specifically on SMEs in Upper Northern Thailand. Comparative research across ASEAN economies could further explore how institutional environments moderate the leadership-knowledge-performance relationship. Integrating ESG performance indicators directly into structural models may also deepen understanding of sustainability-driven competitiveness.

In conclusion, this study provides strong empirical evidence that entrepreneurial leadership enhances SME performance both directly and indirectly through the development of intellectual capital. By integrating strategic management theory, institutional political economy perspectives, and sustainability frameworks, the findings extend the resource-based and knowledge-based views to the Asian institutional context.

Strengthening leadership-driven knowledge capabilities is therefore essential not only for improving firm-level competitiveness but also for supporting inclusive, innovation-driven economic development in emerging economies.

Recommendations

The findings highlight entrepreneurial leadership and intellectual capital as critical drivers of SME competitiveness in Upper Northern Thailand. Given the absence of significant differences across firm size and export status, leadership development should be treated as a systemic priority rather than a segmented intervention.

Entrepreneurial leadership competencies, particularly opportunity recognition, strategic adaptability, calculated risk-taking, and an orientation toward innovation, are essential for navigating economic uncertainty and accelerating digital transformation. SME leaders should therefore engage in continuous executive development programs focusing on strategic foresight, innovation governance, and knowledge orchestration.

At the organizational level, intellectual capital should be strengthened through integrated capability-building strategies. Human capital investments should prioritize digital literacy, analytical skills, and cross-functional collaboration to enhance workforce adaptability. Structural capital development requires formalized knowledge management systems, digital workflow integration, and standardized operational processes that institutionalize learning. Relational capital should be cultivated through strategic partnerships with customers, suppliers, universities, and regional innovation networks to facilitate knowledge exchange and innovation spillovers.

From a macro-policy perspective, SME support frameworks should shift from size-based classifications toward ecosystem-oriented capacity-building strategies. Integrating leadership development with digital transformation incentives, innovation financing mechanisms, and knowledge-sharing platforms would significantly enhance systemic competitiveness. This approach is directly aligned with ESG priorities, as workforce development contributes to SDG 8 (decent work and economic growth), innovation infrastructure supports SDG 9 (industry, innovation, and infrastructure), and strengthened governance networks align with SDG 16

(peace, justice, and strong institutions). Future research should adopt longitudinal and multi-level designs to capture evolving leadership-knowledge dynamics and explore institutional variations across ASEAN economies. Ultimately, coordinated action at the leadership, organizational, and policy levels is essential to promote sustainable SME resilience and innovation-driven economic growth.

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