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Social Capital as a Catalyst for Entrepreneurial Leadership and Employee Supply Chain Innovation: Driving Distribution Efficiency and Logistics Optimization in Vietnamese SMEs

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Abstract

Purpose: This study investigates how entrepreneurial leadership mobilises employee innovative behaviour to enhance distribution efficiency in Vietnamese small and medium enterprises (SMEs), with particular emphasis on logistics optimisation and supply chain management improvements. The research examines psychological and organisational mechanisms through which leadership drives distribution-specific innovations whilst introducing family background as a social capital moderator reflecting Vietnam's relationship-intensive commercial networks. **Research design, data and methodology:** Cross-sectional survey data were collected from 978 employees across 89 Vietnamese SMEs operating in distribution-intensive sectors. Structural equation modelling via Smart PLS 4.1 tested hypothesised relationships, incorporating rigorous common method bias assessments and multi-group analysis examining demographic and organisational variations. **Results:** Entrepreneurial leadership demonstrated substantial direct effects on employee innovative behaviour and significant indirect effects through all hypothesised mediators. Family background significantly moderated the leadership-innovation relationship, with bias-corrected bootstrap confidence intervals confirming mediation robustness. Multi-group analysis revealed stronger effects among female employees and non-financial enterprises. **Conclusions:** Findings advance distribution science by demonstrating how social capital amplifies leadership effectiveness in fostering employee-generated solutions for logistics inefficiencies and supply chain constraints. The study provides evidence that human capital optimisation through entrepreneurial leadership represents a viable pathway for resource-constrained SMEs to achieve competitive advantage in relationship-intensive distribution networks.

Keywords: distribution efficiency, logistics optimisation, entrepreneurial leadership, social capital, supply chain innovation, employee innovative behaviour, Vietnamese SMEs, channel management, online retailing, wholesale

JEL Classification Code: D00, O10, O30

1. Introduction

Vietnam's distribution ecosystem presents a compelling paradox for supply chain management research: while the country has emerged as a critical node in global value chains, domestic SMEs confront logistics costs representing 16-20% of GDP—substantially exceeding developed economy benchmarks of 8-12% and constraining operational viability within increasingly competitive markets (Do et al., 2025). These elevated costs reflect systematic inefficiencies across fragmented wholesale networks, inadequate cold chain infrastructure, suboptimal last-mile delivery systems, and insufficient integration between traditional wet markets and modern retail formats. The challenges are further compounded by poor coordination between traditional market channels and

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emerging online retailing platforms, which place additional pressure on last-mile delivery systems whilst demanding sophisticated channel management capabilities that many SMEs struggle to develop.

Vietnam's distinctive geographic profile, extending over 1,650 kilometres with diverse topographical features, compounds distribution complexity by necessitating sophisticated logistics strategies for inventory management, warehousing optimisation, and transportation coordination. The coexistence of traditional trade channels, modern retail formats, and emerging e-commerce platforms demands innovative approaches to distribution channel management that exceed the resource capabilities of individual SMEs operating within conventional logistics frameworks. Effective channel management—encompassing the coordination of wholesale relationships, the integration of online retailing with physical distribution, and the optimisation of multi-channel inventory systems—emerges as a critical challenge for Vietnamese SMEs seeking to compete in increasingly complex commercial environments (Cultural Atlas Editors, 2016).

Contemporary distribution challenges extend beyond infrastructure limitations to encompass strategic inefficiencies in trade relationship management, inadequate adoption of distribution technologies, and suboptimal utilisation of human capital for logistics innovation. The predominance of relationship-based trade practices, whilst culturally embedded, often constrains implementation of standardised logistics processes and performance-driven distribution strategies that characterise efficient supply chain operations in developed markets.

Traditional solutions emphasising technological investments and infrastructure development prove insufficient for resource-constrained SMEs, necessitating alternative approaches that leverage existing organisational capabilities. The capacity to mobilise employee innovative behaviour toward logistics optimisation emerges as a critical determinant of organisational survival and competitive positioning within Vietnam's complex distribution landscape. Entrepreneurial leadership, characterised by opportunity recognition, risk tolerance, and innovation encouragement, represents a potentially transformative approach to unlocking employee-driven solutions for distribution inefficiencies that can circumvent resource constraints through creative problem-solving and process improvements.

This study addresses a significant theoretical and empirical gap in distribution science by examining how entrepreneurial leadership mechanisms specifically drive distribution-oriented employee innovations within relationship-intensive commercial networks characteristic of emerging economies. While existing literature extensively documents general relationships between leadership and innovation, the specific mechanisms through which leadership fosters logistics process improvements, supply chain optimisation initiatives, and retail service enhancements—particularly within resource-constrained developing economy contexts where traditional solutions prove inadequate—remain theoretically underdeveloped and empirically underexplored. Critical questions persist: How can a warehouse employee's innovative idea systematically improve inventory turnover for a wholesale operation? How can a salesperson's frontline feedback lead to a new service model in an online retailing context? What organisational and psychological mechanisms enable such employee-driven innovations to materialise in distribution-intensive SMEs?

The research contributes to distribution science through three primary theoretical advances. First, it extends entrepreneurial leadership theory by demonstrating its specific applicability to channel management contexts, revealing how leadership practices can systematically drive employee innovations specifically in logistics processes, wholesale relationship building, and retail service enhancements rather than generic organisational improvements. Second, it introduces social capital theory to distribution research by examining how family background influences leadership effectiveness within relationship-intensive trade networks, providing novel insights into the social foundations of distribution innovation in collectivist economies. Third, it advances understanding of psychological and organisational mechanisms linking leadership to distribution-specific innovations, offering actionable frameworks for logistics managers seeking competitive advantage through human capital optimisation rather than capital-intensive technological solutions.

2. Literature Review and Hypotheses Development

2.1. Theoretical Foundation: Integrating Human Capital and Social Capital in Distribution Science

Distribution science has traditionally emphasised technological solutions, infrastructure investments, and process standardisation as primary mechanisms for enhancing logistics efficiency and supply chain performance (Anderson et al., 2014). This technology-centric perspective, whilst valuable for resource-abundant organisations, inadequately addresses the human capital dimensions of distribution innovation, particularly within SMEs where capital constraints preclude large-scale technological investments yet operational pressures demand continuous efficiency improvements.

Recent theoretical developments suggest that sustainable competitive advantage in distribution contexts increasingly derives from organisational capabilities to mobilise human creativity toward operational excellence rather than technological superiority alone. This human capital perspective assumes particular relevance within emerging economies where relationship-intensive commercial practices, informal logistics networks, and resource constraints create unique innovation imperatives that cannot be addressed through standardised technological solutions.

Entrepreneurial Leadership Theory provides a compelling framework for understanding how leaders systematically drive distribution innovation through employee engagement mechanisms. The theory conceptualises leadership as integrating entrepreneurial orientation with traditional management functions to identify distribution opportunities, mobilise resources for logistics improvements, and cultivate innovative mindsets directed toward supply chain optimisation (Renko et al., 2015). Within distribution-intensive SMEs, entrepreneurial leaders simultaneously function as logistics strategists identifying supply chain inefficiencies and practical managers translating opportunities into actionable innovations through employee mobilisation.

Social Capital Theory extends this perspective by recognising that leadership effectiveness within relationship-intensive distribution networks depends partly on employees' access to social resources that can amplify or constrain innovative behaviours. Bourdieu's (1986) conceptualisation of social capital as accumulated social resources—including networks, relationships, and shared knowledge—provides theoretical grounding for understanding how family background moderates leadership effectiveness in Vietnamese commercial contexts where business relationships often transcend formal organisational boundaries.

The integration of human capital mobilisation through entrepreneurial leadership with social capital resources through family networks offers a novel theoretical framework for understanding distribution innovation within emerging economy contexts where both relationship dependence and resource constraints create distinctive innovation imperatives.

2.2. Entrepreneurial Leadership and Distribution Innovation: Direct Effects

Empirical evidence consistently demonstrates positive relationships between entrepreneurial leadership and employee innovative behaviour across diverse organisational contexts (Newman et al., 2018; Malibari & Bajaba, 2022). Within distribution contexts, this relationship assumes particular significance as employee innovations in logistics processes, inventory management systems, trade relationship optimisation, and retail service delivery can substantially impact organisational competitiveness and operational efficiency.

The theoretical mechanism operates through inspirational vision creation that connects individual contributions to distribution success, enhancing employees' intrinsic motivation to innovate in logistics and retail operations. Entrepreneurial leaders provide autonomy and resources for experimentation with novel distribution approaches, reducing structural barriers to creative activity in supply chain management. Additionally, they serve as role models demonstrating that distribution-related innovative behaviour—such as proposing warehouse layout improvements, developing supplier relationships, or implementing customer service enhancements—is valued and rewarded within organisational systems.

Vietnamese SME contexts strengthen this relationship through cultural factors emphasising respect for authority and collective success in business operations. When entrepreneurial leaders communicate innovation expectations related to distribution efficiency whilst providing supportive resources for logistics improvements, employees respond with enhanced creative efforts directed toward supply chain optimisation and trade relationship development (Do et al., 2025).

H1: Entrepreneurial leadership has a direct positive effect on employee innovative behaviour in distribution contexts.

2.3. Mediating Mechanisms: Expectancy Framework in Distribution Innovation

2.3.1. Expected Image Outcomes in Distribution Innovation

Expectancy theory provides a robust framework for understanding how entrepreneurial leadership influences distribution-related innovative behaviour through outcome expectations (Vroom, 1964). Yuan and Woodman's (2010) extension of expectancy theory to innovation contexts identifies image-related outcomes as critical determinants of creative behaviour. In distribution contexts, employees evaluate potential social consequences of innovative actions in logistics or retail operations, considering both risks of negative social judgments from colleagues or trade partners and potential gains through enhanced reputation as distribution innovators.

Entrepreneurial leaders influence these expectations through signalling mechanisms relevant to distribution innovation. Leaders who publicly endorse experimentation with novel logistics approaches, celebrate learning from distribution-related failures, and recognise innovative efforts in supply chain management communicate that distribution innovation yields positive rather than negative social outcomes (Farzaneh & Boyer, 2019). This signalling

reduces employees' concerns about image risks associated with proposing unconventional distribution solutions whilst simultaneously elevating anticipated image gains from successful logistics innovations.

Vietnam's face-conscious culture intensifies the relevance of image expectations in distribution contexts where supply chain relationships and trade partnerships depend heavily on reputation and social harmony. When employees anticipate that proposing logistics improvements or challenging established supply chain practices might result in loss of face or social criticism, innovative behaviour becomes constrained regardless of potential performance benefits (Miron-Spektor et al., 2015).

H2: Entrepreneurial leadership has a negative effect on expected image risks related to distribution innovation.

H3: Entrepreneurial leadership has a positive effect on expected image gains from distribution innovation.

2.3.2. Expected Performance Outcomes in Distribution Innovation

Expectancy theory emphasises that motivation depends upon beliefs that effort will yield valued performance outcomes. In distribution contexts, entrepreneurial leaders enhance employees' performance expectations by explicitly connecting innovative logistics, supply chain management, and retail operations activities to job success, career advancement, and organisational effectiveness. Leaders strengthen perceived instrumentality between distribution innovation and positive performance consequences through clear communication about distribution performance metrics, resource provision for logistics improvements, and recognition systems rewarding supply chain innovations (Kang et al., 2015).

Vietnamese SMEs operating in resource-constrained environments where performance improvements through distribution innovation can significantly impact organisational viability benefit when entrepreneurial leaders articulate connections between employee innovations and distribution efficiency outcomes—such as reduced logistics costs, improved delivery times, enhanced customer satisfaction, and strengthened trade relationships.

H4: Entrepreneurial leadership has a positive effect on expected positive performance outcomes from distribution innovation.

2.4. Organisational Context Mediators

2.4.1. Climate for Distribution Innovation

Organisational innovation climate represents employees' collective perceptions of organisational support, resources, and incentives for creative activities directed toward distribution improvements and logistics optimisation (Park & Jo, 2018). In distribution contexts, innovation climate encompasses perceptions of management support for logistics experimentation, availability of resources for supply chain improvements, tolerance for distribution-related failures, and encouragement of trade relationship innovations.

Entrepreneurial leaders shape distribution innovation climate through daily interactions, resource allocation decisions, and feedback patterns related to logistics activities. Effective leaders create environmental conditions facilitating distribution innovation by consistently encouraging experimentation with novel logistics approaches, providing psychological safety for supply chain-related risk-taking, allocating time and resources for creative pursuits in distribution management, and establishing communication channels capturing employee suggestions for logistics improvements (Anderson et al., 2014).

H5: Entrepreneurial leadership has a positive effect on climate for distribution innovation.

2.4.2. Organisational Innovation Culture

While climate represents immediate environmental perceptions, organisational innovation culture reflects deeper assumptions and values regarding continuous improvement in distribution operations (Schein, 1992). In distribution-intensive SMEs, innovation culture encompasses shared beliefs about the value of logistics optimisation, importance of trade relationship development, necessity of retail service enhancement, and organisational commitment to distribution excellence through employee-driven innovations.

Innovation climate serves as a precursor to innovation culture development, with sustained positive perceptions of organisational support for distribution innovation gradually institutionalising into cultural values prioritising continuous improvement in logistics processes, supply chain management, and retail operations (Park & Jo, 2018).

H6: Climate for distribution innovation has a positive effect on organisational innovation culture.

2.5. Outcome Pathways in Distribution Innovation

The mediating mechanisms influence distribution-specific innovative behaviour through distinct pathways. Expected image risks function as inhibitors, reducing innovation likelihood when employees anticipate negative social consequences from proposing unconventional logistics solutions or challenging established supply chain practices (Chen, 2022). Conversely, expected image gains and positive performance outcomes motivate innovation when employees anticipate valuable outcomes from distribution-related creative contributions (Anderson et al., 2014).

Organisational innovation culture provides normative foundations making distribution-related innovative behaviour an expected and valued organisational contribution, thereby increasing baseline innovation levels across employees in logistics, supply chain management, and retail operations (Li & Liu, 2022).

H7: Expected image risks have a negative effect on distribution-related innovative behaviour.

H8: Expected image gains have a positive effect on distribution-related innovative behaviour.

H9: Expected positive performance outcomes have a positive effect on distribution-related innovative behaviour.

H10: Organisational innovation culture has a positive effect on distribution-related innovative behaviour.

2.6. Moderating Role of Family Background: Social Capital Theory Integration

Social Capital Theory conceptualises family background as a source of social capital that individuals mobilise to access resources, information, and opportunities (Bourdieu, 1986). In Vietnamese distribution contexts where family networks play central roles in trade relationships, supplier connections, and retail partnerships, family background represents a crucial moderating factor amplifying or attenuating leadership effectiveness in fostering distribution-related innovations.

The theoretical mechanism operates through resource complementarity particularly relevant to distribution contexts. When entrepreneurial leaders encourage logistics innovation, employees with strong family backgrounds—characterised by educational resources, financial stability, entrepreneurial experience, and extensive business networks—possess greater capacity to translate leadership signals into innovative actions. These employees access complementary resources reducing personal risks associated with distribution innovation whilst providing additional support for creative initiatives in retail and logistics operations (Dinh et al., 2024).

Family background moderates the entrepreneurial leadership-innovative behaviour relationship through three primary mechanisms. First, financial security provided by family resources reduces personal risk associated with innovative failures, enabling employees to experiment with novel distribution approaches without fear of economic consequences. Second, educational and cultural resources enhance employees' capacity to recognise distribution improvement opportunities and develop creative solutions to logistics challenges. Third, business networks provide access to information, expertise, and collaborative opportunities that can support implementation of distribution innovations.

This moderation effect assumes particular significance within Vietnam's relationship-intensive commercial environment where business success often depends on social connections transcending formal organisational boundaries. Employees with strong family backgrounds possess social capital enabling them to navigate complex relationship networks, access informal logistics channels, and leverage collaborative opportunities for distribution improvements that employees with weaker family backgrounds cannot access.

H11: Family background moderates the relationship between entrepreneurial leadership and distribution-related innovative behaviour, such that the relationship is stronger for employees with stronger family backgrounds.

2.7. Group Differences in Distribution Innovation

Gender differences in risk tolerance, social orientation, and career priorities may create differential responses to entrepreneurial leadership, particularly in distribution contexts where logistics and supply chain management have traditionally been male-dominated domains (Horwitz & Horwitz, 2007). Female employees may demonstrate enhanced responsiveness to supportive leadership approaches that encourage innovation whilst addressing concerns about image risks in traditionally masculine organisational contexts.

Similarly, firm type differences in distribution requirements, logistics complexity, and supply chain sophistication may moderate entrepreneurial leadership effectiveness. Non-financial firms typically face more direct distribution challenges and may provide more conducive environments for leadership-driven distribution innovations compared to financial service organisations with less immediate logistics imperatives.

H12: The effects of entrepreneurial leadership on distribution innovation differ between male and female employees.

H13: The effects of entrepreneurial leadership on distribution innovation differ across firm types.

3. Methodology

3.1. Research Design and Sample

This study employed a cross-sectional survey design to examine relationships among entrepreneurial leadership, mediating variables, and employee innovative behaviour in Vietnamese SMEs operating in distribution-intensive sectors. The target population comprised employees working in SMEs across Vietnam's three major regions

(Northern, Central, and Southern), ensuring geographic representativeness within the country's diverse economic and distribution landscape.

Data collection occurred between December 15, 2022, and March 31, 2024, utilising a stratified sampling approach targeting SMEs with significant distribution components. Following comprehensive data cleaning and validation procedures, 978 valid responses were retained from 1,255 distributed questionnaires across 89 SMEs, representing a 77.9% effective response rate. The participating SMEs spanned manufacturing with direct-to-retail operations (34.2%), logistics and transportation services (28.7%), wholesale and retail trade (24.1%), and e-commerce platforms (13.0%).

Sample characteristics demonstrated appropriate diversity for hypothesis testing. Gender distribution comprised 52.3% male and 47.7% female respondents. Educational levels ranged from secondary education to postgraduate degrees, with 68.2% holding bachelor's degrees or higher. Work experience varied from less than one year to over ten years, with the majority (58.7%) having 2-7 years of experience in current organisations, including substantial exposure to distribution-related functions.

3.2. Measurement Instruments

All constructs were measured using established scales adapted to the Vietnamese context through translation and back-translation procedures conducted by bilingual experts in management and psychology. The questionnaire employed 5-point Likert scales ranging from 1 (strongly disagree) to 5 (strongly agree) for attitudinal measures and 1 (never) to 5 (always) for behavioural frequency measures. Innovative behaviour items were specifically contextualised to capture distribution-related innovations such as logistics improvements, supply chain enhancements, and retail service innovations.

3.2.1. Entrepreneurial Leadership (ELS)

Entrepreneurial leadership was measured using a refined version of Renko et al.'s (2015) scale. Following exploratory factor analysis, the original 7-item scale was reduced to 5 items due to cross-loadings and factor loadings below 0.7 for items ELS3 and ELS7. The retention criteria followed Hair et al.'s (2019) recommendations requiring factor loadings exceeding 0.7 and cross-loadings below 0.4. The retained items captured key dimensions relevant to distribution contexts: generating radical improvement ideas including logistics innovations (ELS1), proposing new product/service concepts encompassing distribution services (ELS2), demonstrating creative problem-solving in operational contexts (ELS4), exhibiting work passion extending to distribution excellence (ELS5), and presenting creative challenges including logistics and supply chain innovations (ELS6). The scale demonstrated excellent internal consistency (Cronbach's $\alpha = 0.860$, composite reliability = 0.899).

3.2.2. Expected Image Outcomes

Expected image risks (EIR) and expected image gains (EIG) were measured using Yuan and Woodman's (2010) validated scales, contextualised for distribution innovation scenarios. The EIR scale contained three items assessing concerns about negative colleague perceptions regarding distribution innovations, ridicule for proposing novel logistics approaches, and criticism for advocating organisational changes in supply chain management ($\alpha = 0.703$, composite reliability = 0.834). The EIG scale included four items measuring anticipated reputation enhancement through distribution innovation, positive organisational image from logistics improvements, improved supervisor evaluation for supply chain contributions, and recognition for retail service innovations ($\alpha = 0.860$, composite reliability = 0.905).

3.2.3. Expected Positive Performance Outcomes (EPPO)

The EPPO construct utilised three items from Yuan and Woodman (2010), adapted to assess beliefs that innovation improves work effectiveness including distribution efficiency, facilitates task completion in logistics contexts, and enhances unit performance through supply chain improvements. The scale demonstrated acceptable reliability ($\alpha = 0.782$, composite reliability = 0.872).

3.2.4. Organizational Context Variables

Climate for innovation (CFI) was measured using Park and Jo's (2018) scale, refined to 3 items following factor analysis that eliminated items CFI1 and CFI4 due to factor loadings below 0.7. The retained items assessed organisational flexibility in following procedures including distribution protocols, tolerance for differences in logistics approaches, and resource availability for innovation including distribution-related improvements ($\alpha = 0.819$, composite reliability = 0.892).

Organisational innovation culture (IOC) employed three items from Park et al.'s (2016) scale, with IOC4 removed due to inadequate factor loading (0.652). The scale assessed organisational risk tolerance including distribution-related risks, creativity rewards encompassing logistics innovations, and managerial openness to change in supply chain practices ($\alpha = 0.841$, composite reliability = 0.904).

3.2.5. Employee Innovative Behavior (IBE)

The IBE scale adapted De Jong and Den Hartog's (2008) 10-item instrument, with seven items retained following

factor analysis. Items IBE1, IBE5, and IBE9 were eliminated due to factor loadings below 0.7 and significant cross-loadings. The retained scale measured innovation frequency across idea generation, championing, and implementation phases, specifically considering distribution-related innovations such as proposing novel logistics processes, advocating for supply chain improvements, and implementing retail service enhancements. The scale demonstrated excellent reliability ($\alpha = 0.909$, composite reliability = 0.928).

3.2.6. Family Background (FB)

Family background was operationalised using a 5-item scale developed for this study based on Social Capital Theory and extensive pilot testing. The scale development process involved three phases: theoretical conceptualisation based on Bourdieu's (1986) social capital framework, expert review by five academics specialising in Vietnamese business culture, and pilot testing with 127 SME employees. Content validity was established through expert assessment (Content Validity Ratio = 0.89), and construct validity was confirmed through exploratory factor analysis revealing a single-factor solution explaining 91.6% of variance.

The scale assessed family educational attainment, income stability providing risk tolerance for innovation, entrepreneurial experience offering business insights, distribution business connections facilitating logistics improvements, and multilingual capabilities relevant to international trade relationships. The scale demonstrated exceptional reliability ($\alpha = 0.989$, composite reliability = 0.991), reflecting the coherent nature of family-based social capital resources.

3.2.7. Control Variables

Gender (coded: 0 = male, 1 = female) and firm type (coded: 0 = non-financial, 1 = financial) served as grouping variables for multi-group analysis rather than traditional controls, enabling examination of differential model relationships across these categories with particular attention to gender and firm type influences on distribution-related innovation patterns.

3.3. Data Analysis Procedures

Data analysis employed structural equation modelling (SEM) using Smart PLS 4.1, selected for its capacity to handle complex mediation models with multiple pathways, robustness to non-normal data distributions, and focus on prediction-oriented analysis appropriate for this exploratory theoretical integration. The analysis proceeded through measurement model evaluation, structural model assessment, mediation analysis, and multi-group comparison.

The choice of PLS-SEM over covariance-based SEM was justified by several factors: the complex model structure incorporating multiple mediators and moderators, the prediction-oriented research objectives focusing on explained variance in distribution innovation, and the exploratory nature of integrating Social Capital Theory with entrepreneurial leadership research in distribution contexts. Additionally, preliminary normality tests indicated non-normal data distributions (Shapiro-Wilk $p < 0.001$ for all constructs), supporting PLS-SEM's distributional flexibility.

3.4. Common Method Bias Assessment

Common method bias (CMB) was addressed through both procedural and statistical approaches. Procedurally, questionnaire design included reverse-coded items, varied response scales, and clear instructions emphasising honest responses regarding distribution innovation behaviours. Data collection employed temporal separation where possible, with some organisations completing leadership assessments at different times from innovation behaviour measurements.

Statistically, multiple CMB assessments were conducted. Harman's single-factor test revealed that the largest unrotated factor explained 34.7% of total variance, below the 50% threshold indicating problematic CMB. The Full Collinearity Assessment (Kock, 2015) examined VIF values when all constructs predicted each dependent variable, with all VIF values below 3.3 (range: 1.24-2.89) indicating CMB was not a serious concern. Additionally, the heterotrait-monotrait (HTMT) approach provided conservative discriminant validity assessment partially addressing CMB concerns, with all values below 0.85.

4. Results

4.1. Measurement Model Results

The measurement model demonstrated satisfactory psychometric properties across all constructs. Table 1 presents reliability and validity indicators for all latent variables.

Table 1: Reliability and Validity Assessment

Construct	Cronbach's Alpha	rho_a	rho_c	AVE
CFI	0.819	0.822	0.892	0.734
EIG	0.860	0.867	0.905	0.706
EIR	0.703	0.719	0.834	0.626
ELS	0.860	0.862	0.899	0.641
EPPO	0.782	0.796	0.872	0.696
FB	0.989	0.991	0.991	0.958
IBE	0.909	0.920	0.928	0.651
IOC	0.841	0.844	0.904	0.759

All constructs exceeded conventional thresholds for reliability (Cronbach's alpha > 0.7, composite reliability > 0.7) and convergent validity (AVE > 0.5). Factor loadings for retained items ranged from 0.715 (IBE10) to 0.986 (FB5), indicating strong relationships between indicators and their respective constructs.

4.2. Discriminant Validity

Table 2 presents the heterotrait-monotrait ratio (HTMT) matrix, demonstrating discriminant validity across all construct pairs.

Table 2: Heterotrait-Monotrait Ratio (HTMT) Matrix

	CFI	EIG	EIR	ELS	EPPO	FB	IBE
CFI							
EIG	0.394						
EIR	0.516	0.387					
ELS	0.575	0.359	0.430				
EPPO	0.375	0.099	0.172	0.334			
FB	0.224	0.156	0.094	0.086	0.199		
IBE	0.764	0.545	0.550	0.574	0.433	0.342	
IOC	0.320	0.336	0.183	0.233	0.332	0.207	0.535

All HTMT values remained below the conservative 0.85 threshold, confirming discriminant validity between constructs. The highest HTMT value (0.764) occurred between CFI and IBE, which is theoretically appropriate given their conceptual relationship whilst maintaining statistical distinctiveness.

4.3. Model Fit Assessment

The structural model demonstrated acceptable fit indices within PLS-SEM parameters. The saturated model achieved SRMR = 0.048, indicating excellent fit, whilst the estimated model showed SRMR = 0.115. Whilst this value approaches the upper threshold of acceptability (0.12), PLS-SEM prioritises predictive relevance (R^2) and explanatory power over absolute fit indices. The model's focus on maximising explained variance in distribution innovation behaviour ($R^2 = 0.693$) supports its theoretical and practical utility despite the moderate SRMR value for the estimated model.

4.4. Structural Model Results

4.4.1. Direct Effects

Table 3 presents structural model results for direct relationships with bootstrap-derived confidence intervals (5,000 bootstrap samples).

Table 3: Path Coefficients and Hypothesis Testing

Path	Coefficient	Standard Deviation	T-statistic	p-value	Hypothesis	Support
ELS → IBE	0.456	0.023	19.924	0.000	H1	Yes
ELS → EIR	-0.342	0.027	12.606	0.000	H2	Yes
ELS → EIG	0.311	0.033	9.452	0.000	H3	Yes
ELS → EPPO	0.283	0.025	11.418	0.000	H4	Yes
ELS → CFI	0.487	0.025	19.732	0.000	H5	Yes
CFI → IOC	0.267	0.027	9.909	0.000	H6	Yes
EIR → IBE	-0.164	0.021	7.811	0.000	H7	Yes
EIG → IBE	0.126	0.017	7.347	0.000	H8	Yes
EPPO → IBE	0.085	0.018	4.815	0.000	H9	Yes
IOC → IBE	0.226	0.022	10.090	0.000	H10	Yes
FB × ELS → IBE	0.340	0.018	18.840	0.000	H11	Yes

All hypothesised relationships received empirical support. Hypothesis 1, proposing a positive effect of entrepreneurial leadership on distribution-related employee innovative behaviour, received strong support ($\beta = 0.456$, $p < 0.001$), indicating that entrepreneurial leadership practices directly enhance employees' engagement in logistics improvements, supply chain innovations, and retail service enhancements. This substantial direct effect persists even after accounting for multiple mediating mechanisms, underscoring entrepreneurial leadership's fundamental role in fostering distribution innovation within Vietnamese SMEs.

Regarding psychological mediating mechanisms, entrepreneurial leadership significantly reduces expected image risks associated with proposing logistics improvements or challenging traditional supply chain practices (H2: $\beta = -0.342$, $p < 0.001$) whilst enhancing expected image gains from distribution innovations (H3: $\beta = 0.311$, $p < 0.001$) and expected positive performance outcomes from supply chain enhancements (H4: $\beta = 0.283$, $p < 0.001$). The relationship between entrepreneurial leadership and climate for innovation proves particularly robust (H5: $\beta = 0.487$, $p < 0.001$), representing the strongest pathway in the model and suggesting that distribution-

focused SMEs benefit substantially from leadership approaches encouraging experimentation in logistics and retail operations.

All mediating variables demonstrated significant effects on distribution innovation behaviour in predicted directions. Expected image risks negatively influenced innovation (H7: $\beta = -0.164$, $p < 0.001$), whilst expected image gains (H8: $\beta = 0.126$, $p < 0.001$), expected positive performance outcomes (H9: $\beta = 0.085$, $p < 0.001$), and organisational innovation culture (H10: $\beta = 0.226$, $p < 0.001$) positively influenced distribution-related innovative behaviour.

The moderating role of family background (H11) received strong empirical support with a significant interaction effect ($\beta = 0.340$, $p < 0.001$). Simple slope analysis revealed that the entrepreneurial leadership-innovative behaviour relationship is significantly stronger for employees with robust family backgrounds (high FB: $\beta = 0.621$, $p < 0.001$) compared to those with weaker backgrounds (low FB: $\beta = 0.291$, $p < 0.001$).

4.4.2. Moderation Analysis

Table 4 presents specific indirect effects with bias-corrected bootstrap confidence intervals, demonstrating the mediating mechanisms through which entrepreneurial leadership influences distribution innovation.

Table 4: Specific Indirect Effects

Mediation Path	Indirect Effect	95% CI	t-statistic	p-value	Mediation Type
ELS → CFI → IOC → IBE	0.029	[0.019, 0.040]	5.480	0.000	Partial
ELS → EPPO → IBE	0.024	[0.014, 0.035]	4.304	0.000	Partial
ELS → EIR → IBE	0.056	[0.038, 0.074]	6.369	0.000	Partial
ELS → EIG → IBE	0.039	[0.027, 0.052]	6.245	0.000	Partial
ELS → CFI → IOC	0.130	[0.100, 0.160]	8.386	0.000	Partial
CFI → IOC → IBE	0.060	[0.040, 0.081]	5.845	0.000	Partial

All specific indirect effects proved statistically significant, with confidence intervals excluding zero. The total indirect effects of entrepreneurial leadership on innovative behaviour ($\beta = 0.149$, 95% CI [0.125, 0.173]) complement the substantial direct effect, indicating that entrepreneurial leadership operates through both direct inspirational mechanisms and indirect psychological and organisational pathways. The mediation analysis confirms partial rather than full mediation across all pathways, suggesting that whilst psychological expectations and organisational context significantly explain the leadership-innovation relationship, additional mechanisms beyond those theorised may contribute to this relationship in distribution contexts.

4.4.3. Moderation Analysis and Interaction Plot

The moderating effect of family background on the entrepreneurial leadership-innovative behaviour relationship is illustrated in Figure 1, which displays the interaction pattern across different levels of social capital resources.

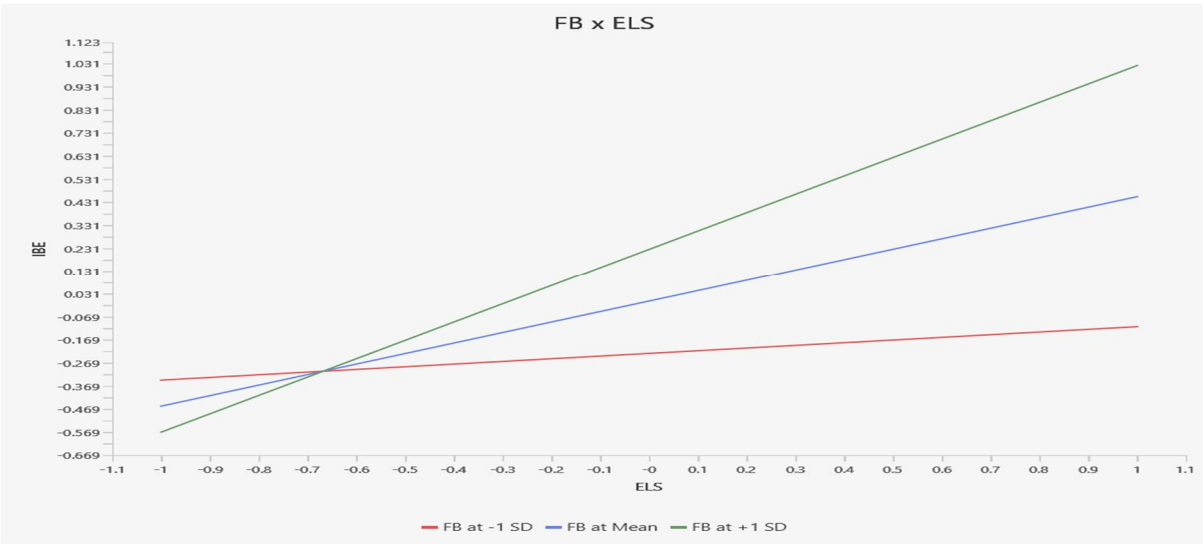

Figure 1: Interaction Effect of Family Background on Entrepreneurial Leadership-Innovation Relationship

The interaction plot confirms the significant moderation effect ($\beta = 0.340$, $p < 0.001$) by revealing distinct slopes across family background levels. The graphical analysis demonstrates that while entrepreneurial leadership positively influences distribution innovation across all conditions, this relationship intensifies substantially with stronger family background resources. The diverging trajectories indicate that employees with high family background (FB at +1 SD) exhibit markedly greater innovation responsiveness to entrepreneurial leadership compared to those with low family background (FB at -1 SD).

The pattern reveals that social capital creates multiplicative rather than additive effects on leadership effectiveness. The steepest divergence occurs at higher entrepreneurial leadership levels, suggesting that family-based social capital becomes increasingly critical as leadership practices intensify. This supports the theoretical proposition that social capital resources amplify employees' capacity to translate entrepreneurial leadership signals into innovative actions within relationship-intensive distribution networks.

4.5. Alternative Model Testing

To assess the robustness of the proposed theoretical model, an alternative simplified model was tested incorporating only direct relationships between entrepreneurial leadership and outcome variables, eliminating all mediating pathways. The alternative model achieved $R^2 = 0.439$ for innovative behaviour, compared to $R^2 = 0.693$ for the full mediation model. The substantial improvement in explained variance ($\Delta R^2 = 0.254$) confirms the theoretical and empirical value of the mediating mechanisms in understanding how entrepreneurial leadership fosters distribution innovation. Additionally, the Akaike Information Criterion (AIC) favoured the full model (AIC difference = 127.3), providing further evidence for the proposed theoretical framework.

4.6. Multi-Group Analysis Results

4.6.1. Gender Differences

Multi-group analysis across gender categories revealed several significant differences in structural relationships with important implications for distribution management (Table 5).

Table 5: Multi-Group Analysis - Gender Differences

Path	Male (β)	Female (β)	Difference	p-value	Significant
ELS → CFI	0.421	0.552	-0.131	0.004	Yes
ELS → EPPO	0.193	0.373	-0.180	0.000	Yes
ELS → IBE	0.370	0.542	-0.172	0.001	Yes
EIR → IBE	-0.116	-0.212	0.096	0.035	Yes

Female employees demonstrated significantly stronger responses to entrepreneurial leadership across multiple pathways relevant to distribution innovation. The stronger climate perception among female employees ($\Delta\beta = -0.131$) suggests enhanced responsiveness to organisational support for distribution-related innovation. Stronger performance expectations ($\Delta\beta = -0.180$) and direct innovative behaviour responses ($\Delta\beta = -0.172$) indicate that female employees may be particularly effective contributors to distribution efficiency improvements when supported by entrepreneurial leadership. However, female employees also showed greater sensitivity to image risk concerns ($\Delta\beta = 0.096$), highlighting the importance of creating psychologically safe environments for distribution innovation in gender-diverse teams.

4.6.2. Firm Type Differences

Significant differences emerged between financial and non-financial enterprises, with important implications for distribution-focused SMEs (Table 6).

Table 6: Multi-Group Analysis - Firm Type Differences

Path	Non-Financial (β)	Financial (β)	Difference	p-value	Significant
CFI → IOC	0.327	0.207	0.120	0.024	Yes
EIR → IBE	-0.237	-0.092	-0.145	0.001	Yes
ELS → CFI	0.590	0.384	0.206	0.000	Yes
ELS → EIG	0.388	0.233	0.155	0.025	Yes
ELS → IBE	0.566	0.347	0.219	0.000	Yes
FB × ELS → IBE	0.383	0.297	0.086	0.033	Yes

Non-financial firms, which include the majority of distribution-intensive SMEs in manufacturing, trade, and logistics services, demonstrated stronger relationships across most pathways. The stronger leadership-climate relationship ($\Delta\beta = 0.206$) and direct leadership-innovation relationship ($\Delta\beta = 0.219$) in non-financial firms suggest that distribution-focused SMEs provide particularly conducive environments for entrepreneurial leadership approaches fostering logistics and supply chain innovations. The moderation effect of family background also proved stronger in non-financial contexts ($\Delta\beta = 0.086$), reflecting the importance of social capital in relationship-intensive

distribution networks characteristic of traditional commerce sectors.

5. Discussion

5.1. Theoretical Implications for Distribution Science

5.1.1. Advancing Human Capital Theory in Distribution Management

This study provides significant theoretical advancement to distribution science by demonstrating that distribution efficiency enhancements in resource-constrained environments can be systematically achieved through entrepreneurial leadership practices mobilising employee innovative behaviour toward logistics optimisation and supply chain improvements. The substantial direct effect (β = 0.456) challenges the predominant technology-centric paradigm in distribution research by providing empirical evidence that human capital optimisation through leadership represents a viable and cost-effective pathway to distribution efficiency enhancement.

These findings extend distribution theory by revealing specific mechanisms through which leadership-driven employee innovations circumvent traditional resource barriers to achieve meaningful improvements in logistics costs, delivery performance, and customer satisfaction. The research demonstrates that SMEs facing capital constraints that preclude large-scale logistics infrastructure investments can achieve competitive advantage through systematic mobilisation of employee creativity toward operational excellence. This human capital perspective offers a theoretical alternative to technology-dependence models that dominate contemporary distribution scholarship.

The integration of multiple mediating pathways—psychological expectations and organisational context factors—provides a comprehensive theoretical framework explaining how entrepreneurial leadership systematically influences distribution innovation rather than relying on general motivational mechanisms. The differential effects of image risks (β = -0.164), image gains (β = 0.126), and performance expectations (β = 0.085) reveal that distribution managers must understand and address employee psychological processes when implementing innovation initiatives in logistics and supply chain management.

5.1.2. Social Capital Theory Integration in Distribution Networks

The substantial moderation effect of family background (β = 0.340) introduces social capital theory as a relevant framework for understanding leadership effectiveness in relationship-oriented distribution systems characteristic of emerging economies. This finding demonstrates that family-based social capital significantly amplifies entrepreneurial leadership effectiveness, suggesting that leadership and social capital operate as complementary rather than substitutable resources in Vietnamese trade networks.

This theoretical contribution has important implications for understanding distribution network dynamics where family and relationship networks significantly influence supplier selection, trade partner relationships, and market access opportunities. The research shows that distribution efficiency improvements through employee innovation depend not solely on organisational factors but are significantly enhanced by broader social capital resources that employees bring to workplace contexts. This extends distribution theory by incorporating social structural factors that have been largely overlooked in favour of technological and organisational variables.

The moderation analysis reveals that employees with stronger family backgrounds (high FB: β = 0.621) respond significantly more strongly to entrepreneurial leadership than those with weaker backgrounds (low FB: β = 0.291), indicating that social capital creates multiplicative rather than additive effects on leadership effectiveness. This finding suggests that distribution managers in relationship-intensive economies must consider employee social capital when designing innovation strategies and may need to provide additional support for employees lacking strong family-based resources.

5.1.3. Expectancy Theory Extension to Distribution Contexts

The successful integration of expectancy theory constructs specifically within distribution innovation contexts provides novel theoretical insights into employee motivation for logistics and supply chain improvements. The differential effects of image risks versus image gains reveal that removing barriers to distribution innovation may be more critical than providing additional incentives, particularly within face-conscious cultures where social image concerns significantly constrain behaviour.

The stronger negative effect of image risks (β = -0.164) compared to positive effects of gains (β = 0.126) and performance outcomes (β = 0.085) suggests that distribution managers must prioritise creating psychologically safe environments for logistics experimentation rather than focusing primarily on reward systems. This finding has particular theoretical relevance for understanding innovation barriers in collectivist cultures where relationship maintenance and face preservation can significantly constrain individual risk-taking in organisational contexts.

5.2. Practical Implications for Distribution Management

5.2.1. Strategic Human Resource Management in Distribution Operations

The findings provide concrete guidance for distribution managers seeking to enhance logistics efficiency through human capital optimisation rather than capital-intensive technological investments. The strong direct effect (β = 0.456) suggests that leadership development programs focusing on opportunity recognition in logistics, creative problem-solving in supply chain management, and innovation encouragement in retail operations can yield immediate benefits for distribution efficiency and customer service delivery.

The mediation analysis reveals that effective distribution leaders must simultaneously attend to multiple influence pathways. Distribution managers should implement specific strategies to reduce image risks by creating psychological safety for logistics experimentation—for instance, establishing 'safe-to-fail' environments where sales teams can test new approaches with wholesale distributors without fear of sanctions if initial trials prove unsuccessful. Managers should publicly endorse supply chain innovation attempts and celebrate learning from distribution failures rather than penalising unsuccessful initiatives. This might involve creating designated pilot zones within warehouse operations where employees can experiment with inventory layout modifications or delivery route optimisations.

Managers should enhance image gains by recognising employees who contribute to distribution improvements through formal recognition programs, showcasing successful logistics innovations within organisational communications, and explicitly linking supply chain contributions to career advancement opportunities. Performance expectations can be strengthened by demonstrating clear connections between distribution innovation and organisational success through regular communication of efficiency metrics, establishing specific measurement systems for logistics improvements, and providing consistent feedback on innovation outcomes.

Climate cultivation requires dedicated resources for distribution experimentation, such as allocated time for employee-led improvement projects, flexible policies supporting logistics innovation trials, and communication systems capturing employee suggestions for supply chain improvements. These systems should specifically focus on distribution-related challenges such as inventory management inefficiencies, transportation route suboptimisation, and customer service delivery constraints.

5.2.2. Gender-Responsive Distribution Innovation Strategies

The multi-group analysis reveals that female employees demonstrate significantly stronger responses to entrepreneurial leadership across multiple pathways relevant to distribution innovation (ELS → CFI: Δβ = -0.131; ELS → IBE: Δβ = -0.172), suggesting that distribution organisations with higher female representation may benefit more substantially from entrepreneurial leadership investments. This finding has important practical implications for workforce planning and leadership development in distribution sectors.

The heightened sensitivity to image risks among female employees (EIR → IBE: Δβ = 0.096) indicates that distribution leaders should focus particular attention on creating inclusive, supportive innovation environments addressing gender-specific concerns in traditionally male-dominated logistics and supply chain fields. Practical strategies include establishing mentorship programs pairing female employees with successful female leaders in logistics, creating diverse project teams for distribution innovation initiatives to ensure female perspectives are represented and valued, and ensuring recognition systems acknowledge contributions from all employees regardless of gender.

Distribution managers should also consider gender-specific communication strategies, with female employees appearing to respond more strongly to supportive, collaborative leadership approaches that emphasise collective success and shared learning from distribution innovations rather than competitive, individual-focused recognition systems.

5.2.3. Industry-Specific Distribution Leadership Approaches

The firm type differences indicate that entrepreneurial leadership proves more effective in non-financial SMEs (ELS → IBE: Δβ = 0.219), which include most distribution-intensive enterprises in manufacturing, wholesale trade, retail operations, and logistics services. This finding suggests that industry context significantly influences leadership effectiveness, with traditional distribution SMEs providing more conducive environments for entrepreneurial leadership approaches than service-oriented organisations with less direct logistics imperatives.

Distribution managers in manufacturing, retail, and logistics sectors should prioritise entrepreneurial leadership development as a core strategic initiative for enhancing operational efficiency. The research indicates that investment in leadership training programs specifically tailored to non-financial firms—particularly those in logistics, retailing, and wholesale operations where employees are closer to the physical supply chain—yields

superior returns compared to generic management development initiatives. Investment in leadership training programs should focus specifically on distribution contexts, including modules on logistics opportunity recognition, supply chain problem-solving methodologies, and innovation management in resource-constrained environments.

Industry associations and government support programs might optimally focus resources on these sectors where entrepreneurial leadership can most effectively drive distribution efficiency improvements. Collaborative programs between SMEs in similar distribution contexts could facilitate knowledge sharing about successful leadership practices and innovation outcomes, creating learning networks that amplify individual organisational improvements.

5.2.4. Social Capital Leveraging Strategies

The significant moderation effect of family background provides practical guidance for leveraging employee social capital in distribution innovation initiatives. Distribution managers should recognise that employees with strong family backgrounds possess social resources that can significantly amplify leadership effectiveness and should design strategies utilising these capabilities whilst providing additional support for employees lacking such resources.

Practical approaches include recognising that family background functions as a practical form of channel management, enabling employees to leverage social—not just financial—capital to build trust with partners in the retail or wholesale channel. Creating mixed teams combining employees with varying social capital levels enables knowledge transfer and resource sharing. Employees with strong family networks might serve as innovation champions, utilising their social connections to access suppliers, identify market opportunities, or navigate regulatory requirements that support distribution improvements. Simultaneously, organisations should provide mentoring, training, and resource support for employees with weaker family backgrounds to ensure equitable participation in innovation activities.

5.3. Policy Implications for Vietnamese Distribution Development

5.3.1. SME Leadership Development Initiatives

The research findings suggest that government and industry association policies should prioritise entrepreneurial leadership development specifically tailored for distribution-intensive SMEs. Traditional management training programs focusing on general business skills may prove insufficient for distribution contexts requiring specialised knowledge of logistics challenges, supply chain optimisation opportunities, and retail innovation possibilities.

Policy recommendations include establishing sector-specific leadership development programs emphasising distribution innovation management, opportunity recognition in logistics contexts, and human capital mobilisation for operational excellence. These programs should incorporate practical components enabling participants to experiment with innovation strategies within their organisations whilst receiving expert guidance and peer support.

Government support might include subsidised training programs, certification systems recognising distribution leadership competencies, and incentive structures encouraging SME participation in leadership development initiatives. Industry associations could facilitate knowledge networks connecting distribution leaders to share best practices and collaborative solutions to common logistics challenges.

5.3.2. Gender Inclusion in Distribution Innovation

The stronger responsiveness of female employees to entrepreneurial leadership approaches suggests that policies promoting gender inclusion in distribution sectors could yield significant efficiency benefits. Current policies might address gender imbalances in logistics and supply chain management through targeted education programs, mentorship initiatives, and recognition systems highlighting female contributions to distribution innovations.

Specific policy interventions could include scholarships for women pursuing logistics and supply chain management education, leadership development programs specifically designed for women in distribution contexts, and public recognition programs showcasing female-led innovations in Vietnamese SME distribution operations. These initiatives could help address cultural barriers constraining female participation in traditionally male-dominated distribution sectors whilst capitalising on demonstrated advantages in innovation responsiveness.

5.3.3. Relationship Network Facilitation

The significant role of family background as social capital suggests that policies facilitating business relationship development and knowledge sharing within distribution networks could enhance overall sector efficiency. Government initiatives might focus on creating platforms and mechanisms enabling SMEs to access broader business networks beyond immediate family connections.

Policy recommendations include establishing industry clusters connecting distribution-focused SMEs, creating digital platforms facilitating supplier-customer relationship development, and supporting collaborative initiatives enabling resource sharing among SMEs facing similar

distribution challenges. These policies could help democratise access to social capital resources currently available primarily through family networks whilst preserving the relationship-intensive character of Vietnamese commercial culture.

Trade association support might include networking events specifically focused on distribution challenges, collaborative problem-solving workshops addressing common logistics inefficiencies, and information-sharing systems enabling SMEs to learn from successful distribution innovations implemented by peers. Such initiatives could create synthetic social capital supplementing family-based networks for employees and organisations lacking extensive business connections.

5.4. Limitations and Future Research Directions

Several limitations warrant acknowledgement whilst suggesting productive avenues for future investigation. The cross-sectional design precludes definitive causal inference, despite strong theoretical grounding suggesting directional relationships. Longitudinal research tracking how entrepreneurial leadership influences distribution innovation over time, particularly during periods of supply chain disruption or market volatility, would strengthen causal claims and provide insights into the sustainability of leadership-driven distribution improvements. Such research could examine whether the observed relationships persist during challenging periods when resource constraints intensify and innovation pressures increase.

The non-random sampling strategy, whilst ensuring geographic and industry diversity, limits generalisability beyond Vietnamese distribution-intensive SMEs. Future research employing probability sampling methods or focusing on specific distribution sectors such as e-commerce logistics, cold chain management, or last-mile delivery could enhance external validity and provide sector-specific insights. Comparative studies across Southeast Asian countries with similar distribution challenges would enhance understanding of cultural and institutional boundary conditions affecting the generalisability of these findings.

Despite procedural and statistical controls, reliance on self-reported measures cannot entirely eliminate common method bias concerns. Multi-source designs combining employee self-reports with supervisor ratings and objective distribution performance metrics—such as logistics cost reductions, delivery time improvements, and customer satisfaction scores—would provide more robust evidence of distribution innovation effectiveness. Future research might incorporate archival performance data to assess whether leadership-driven innovations translate into measurable efficiency improvements.

The unique Vietnamese context, whilst offering valuable insights into collectivist, developing economy dynamics, may limit applicability to individualist cultures or developed economies with different social capital structures and distribution challenges. Comparative studies examining these relationships across different cultural contexts would enhance theoretical precision and practical applicability. Research investigating whether social capital moderation operates similarly in individualist cultures or whether alternative moderators become more relevant would contribute to theoretical development.

Future research might explore additional moderating factors such as organisational slack, industry dynamism, technological intensity, or regulatory environments that shape leadership-innovation relationships in distribution contexts. The stronger effects among female employees warrant deeper investigation into gendered innovation processes in distribution and logistics, particularly examining how leadership practices can promote inclusive innovation in traditionally male-dominated supply chain management roles.

Qualitative research unpacking the specific mechanisms through which family background influences distribution innovation—including risk tolerance variations, network access patterns, and financial security effects—would enrich understanding of social capital's role in Vietnamese business contexts. Case study research examining successful and unsuccessful attempts to implement entrepreneurial leadership in distribution settings could provide practical insights into implementation challenges and success factors not captured in survey methodology.

6. Conclusion

This study addresses a critical theoretical and empirical gap in distribution science by elucidating the mechanisms through which entrepreneurial leadership drives employee innovative behaviour to enhance operational efficiency in Vietnamese SMEs operating within resource-constrained, relationship-intensive commercial networks. The research demonstrates that distribution challenges in emerging economies can be systematically addressed through leadership practices that mobilise employee creativity toward logistics optimisation, supply chain enhancement, and retail service improvement rather than relying exclusively on capital-intensive technological solutions.

The empirical findings confirm that entrepreneurial leadership influences distribution innovation through both substantial direct pathways ($\beta = 0.456$) and multiple mediating mechanisms encompassing psychological expectations and organisational context factors. The discovery of family background as a powerful moderator (β

= 0.340) reveals the critical importance of social capital in amplifying leadership effectiveness within relationship-intensive commercial networks, providing novel theoretical insights into the social foundations of distribution innovation in collectivist economies.

From a theoretical perspective, this research extends distribution science by demonstrating how behavioural and social capital factors complement technological approaches to operational optimisation. The study shows that human capital mobilisation through entrepreneurial leadership, particularly when supported by social capital resources, represents a viable pathway for resource-constrained SMEs to achieve meaningful efficiency improvements without substantial infrastructure investments. The integration of Social Capital Theory with entrepreneurial leadership research provides a novel framework for understanding distribution innovation in emerging economy contexts where relationship networks significantly influence business operations.

The practical implications prove particularly relevant for Vietnamese distribution managers confronting elevated logistics costs and competitive pressures from both traditional channels and emerging e-commerce platforms. The research demonstrates that SMEs can implement targeted leadership development focusing on distribution contexts, create psychologically safe environments for logistics experimentation, and leverage employee social capital to amplify innovation outcomes. Gender-sensitive approaches recognising stronger female responsiveness to entrepreneurial leadership can enhance innovation effectiveness, whilst industry-specific strategies acknowledging differential effectiveness across firm types can optimise resource allocation.

The policy implications suggest that government and industry association initiatives should prioritise entrepreneurial leadership development specifically tailored for distribution contexts, promote gender inclusion recognising demonstrated female advantages in innovation responsiveness, and facilitate business relationship networks that democratise access to social capital resources beyond immediate family connections. These interventions could enhance overall distribution sector efficiency whilst preserving the relationship-intensive character of Vietnamese commercial culture.

The research contributes to the broader theoretical understanding of innovation in resource-constrained environments by demonstrating that leadership-driven human capital optimisation can substitute for technological resource limitations when supported by appropriate social capital resources. This finding has implications beyond Vietnamese contexts for understanding innovation processes in emerging economies characterised by relationship-intensive business practices and limited access to advanced logistics technologies.

Future research should explore the temporal sustainability of leadership-driven efficiency improvements, examine cross-cultural variations in social capital moderation effects, and investigate sector-specific applications within specialised distribution domains such as e-commerce logistics or cold chain management. The integration of objective performance measures with behavioural assessments would strengthen evidence for the practical effectiveness of entrepreneurial leadership approaches in achieving measurable distribution efficiency improvements.

This study ultimately provides evidence-based guidance for leveraging human capital and social capital resources to achieve competitive advantage in distribution contexts where traditional technological solutions prove inadequate or inaccessible, positioning relationship-intensive emerging economies to compete effectively through innovation capabilities that transcend resource constraints.

Ultimately, this research provides an evidence-based roadmap for SME managers seeking to enhance their competitiveness in increasingly demanding distribution environments. It demonstrates that organisations can improve channel management effectiveness, optimise both physical distribution and online retailing operations, and strengthen wholesale partnerships not solely through capital-intensive infrastructure investments, but by cultivating entrepreneurial leadership practices from within that systematically mobilise employee-driven innovations addressing the tangible, everyday challenges of logistics efficiency, supply chain coordination, and retail service excellence.

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