Asian Administration and Management Review

Original Research Article

Received: 26 December 2024 **Revised:** 15 January 2025 **Accepted:** 16 January 2025

THE INFLUENCE OF ENTREPRENEURIAL LEADERSHIP ON CHINESE START-UP ENTERPRISE PERFORMANCE: THE MEDIATING EFFECT OF INTERNAL SOCIAL CAPITAL

Yanyan SONG[1] and Lu SUO[1]

1 Graduate School, Stamford International University, Thailand;
lusuo2024@gmail.com (L. S.)

Handling Editor:
Professor Dr.Wing-Keung WONG Asia University, Taiwan
(This article belongs to the Theme 1: Business & Economic in Industry 5.0)

Reviewers:
1) Professor Dr.Fazida KARIM UniSZA, Malaysia
2) Professor Dr.Kittisak WONGMAHESAK UMS Rappang, Indonesia
3) Assistant Professor Dr.Wisit RITTIBOONCHAI NPRU, Thailand

Abstract

This paper explores the influence of entrepreneurial leadership styles on network relationships, collective efficacy, and the performance of start-ups in light of the significant changes in the modern era and the unique environment of start-ups. Leveraging Leadership, Upper Echelons, and Social Capital Theory, the study investigates the mechanisms that underpin these interactions. Data was collected through questionnaires using purposive sampling, yielding valid responses from 403 CEOs and leaders of start-ups in Beijing, China. Employing the Bootstrap method as proposed by Hayes, the study tests its hypotheses and reports several key findings: first, entrepreneurial transformational leadership positively affects start-up performance; second, the entrepreneurial transactional leadership style demonstrates an inverted U-shaped relationship with start-up performance; third, network relationships mediate the relationship between leadership style and performance; and finally, collective efficacy also serves as a mediator in this context. This research contributes significantly to the literature by expanding the understanding of Leadership Theory as it pertains to new ventures, enhancing insights into Upper Echelons and Social Capital Theory through the roles of network relationships and collective efficacy. The theoretical model also provides practical guidance for established firm leaders in nurturing an entrepreneurial spirit among their employees.

Keywords: Leadership Style, Social Capital Theory, Start-Up Performance, Upper Echelons Theory

Citation Information: Song, Y., & Suo, L. (2025). The Influence of Entrepreneurial Leadership on Chinese Start-Up Enterprise Performance: The Mediating Effect of Internal Social Capital. *Asian Administration and Management Review, 8*(1), Article 11. https://doi.org/10.14456/aamr.2025.11

Introduction

Entrepreneurial leadership, defined by innovation, proactiveness, and risk-taking, significantly influences start-up success. This leadership style fosters the execution of new ideas and promotes adaptability in uncertain environments (Cheewakoset et al., 2024). Entrepreneurial leaders play a vital role in team development by encouraging collaboration, shared goals, and entrepreneurial thinking among members (Alshanty & Emeagwali, 2019). Their actions drive firm performance, enabling start-ups to overcome challenges of limited resources, underdeveloped structures, and market uncertainty

China's start-up ecosystem reflects the impact of entrepreneurial leadership. Ranking 10th globally in 2022, China's start-ups thrive in tech-driven industries like fintech, healthcare, and logistics (China Briefing, 2023). Entrepreneurial leadership in these start-ups helps address low survival rates, limited resource access, and market acceptance issues. Effective team management, social capital optimization, and network integration enable start-ups to build trust, resolve conflicts, and achieve shared goals (Minhas & Sindakis, 2020). These elements highlight the crucial role of entrepreneurial leadership in navigating uncertainty and driving firm performance.

Despite substantial evidence that entrepreneurial leadership supports start-up success, there are unresolved issues in the existing literature. First, while studies highlight the positive impact of transformational and transactional leadership on firm performance (Chang & Chen, 2017; Tung et al., 2016), conflicting findings suggest negative (Afsar et al., 2016) or curvilinear effects (Chen, 2019; Shao et al., 2017). Second, most studies analyze leadership's impact at the individual or organizational level (Zhang & Kim, 2020; Ting et al., 2021), with limited focus on team-level processes. Since team interaction is critical to translating leadership into organizational outcomes, exploring this mechanism is essential. Third, social capital theory, commonly applied to organizational and individual studies (Kang, 2018), has been underexplored at the team level. Social capital, divided into structural and relational dimensions, significantly influences team processes. Structural embeddedness relates to network connections and structure (Huang & Provan, 2007), while relational embeddedness involves trust, norms, and shared responsibility (Granovetter, 1992). These dimensions are crucial for start-ups, where effective networks support resource access and enhance cooperation (Sanz-Blas et al., 2021). Finally, while existing research recognizes collective efficacy and network ties as key team variables (Gottfredson et al., 2017), few models integrate them to explain how leadership affects start-up performance.

Therefore, this study proposes an integrated model of transformational and transactional leadership styles, team-level social capital, and start-up performance, offering a holistic view of leadership's role in driving success.

Literature Reviews

Transformational leadership, characterized by inspiring and motivating subordinates to foster trust, respect, and loyalty, is particularly beneficial for start-ups that emphasize a shared vision (Boukamcha, 2019; Kelemen et al., 2020). Empirical studies have consistently demonstrated a positive relationship between transformational leadership and organizational performance. For instance, a meta-analysis by Bonini et al. (2024) found a significant positive correlation between leadership and adaptive performance, highlighting the role of transformational leadership in enhancing employees' adaptability in rapidly changing environments. Similarly, Shahzad et al. (2022) reported that transformational leadership positively affects firm performance, with corporate sustainability mediating this relationship. These findings underscore the importance of transformational leadership in driving organizational success, particularly in dynamic and resource-constrained settings like start-ups. Based on these insights, this study hypothesizes:

H1: Transformational leadership positively and significantly impacts start-up performance.
Transactional leadership, centered on structured exchange relationships, clarifies roles, tasks, and outcomes to guide employees toward organizational goals (Afsar et al., 2016). While it aligns individual contributions with organizational objectives, its broader impact on business performance is contested. Contingent rewards have been associated with higher job satisfaction and firm performance but may also stifle innovation and entrepreneurial behavior (Shao, 2017). Similarly, the effectiveness of management by exception remains debated, with outcomes ranging from positive to negligible (Bass et al., 2003). In resource-constrained and uncertain start-up environments, transactional leadership provides short-term advantages by enhancing performance through clear guidance and task-focused management. By defining responsibilities and offering contingent rewards and constructive feedback, transactional leaders reduce ambiguity and foster mutual commitment through social exchange principles (Hinkin, 2008). However, transactional leadership's limitations emerge as start-ups mature and prioritize innovation. Its focus on stability and control suppresses creativity, reduces autonomy, and discourages proactive behavior (Afsar et al., 2016). Research highlights its negative impact on innovation performance and adaptability in dynamic environments (Jia et al., 2018). The "inverted U-shaped effect" suggests its benefits decline as growth demands innovation and flexibility, with limitations outweighing advantages in later stages (Bass et al., 2003). Based on this, the study proposes the following hypothesis
H2: Transactional leadership has an inverted U-shaped effect on start-up performance.
Transformational leaders enhance team learning by fostering the exchange of explicit and tacit knowledge through improved communication and a supportive learning environment (Burmeister, 2020). By inspiring enthusiasm and leading by example, they encourage information sharing, collective learning, and the development of innovative skills (Chen et al., 2018; Xie, 2018). These leaders align teams around shared goals, facilitating knowledge absorption and experience sharing to achieve collective objectives (Jiang & Chen, 2018). Transformational leadership strengthens team relationships by encouraging diverse opinions, fostering collaboration, and offering individualized support through frequent communication (Gottfredson & Aguinis, 2017). High-density team networks enhance the knowledge base, address resource bottlenecks, and improve start-up performance (Hendricks et al., 2019a). By clarifying goals and inspiring consensus, these leaders mitigate task ambiguity, reduce conflicts, and enhance performance through intellectual stimulation and spiritual encouragement (Hendricks et al., 2019b). Internal networks positively influence organizational performance by facilitating resource acquisition, knowledge exchange, and problem-solving. Strong networks lower cooperation costs related to partner selection, trust-building, and information transfer, boosting profitability (Gonzalez-Brambila et al., 2013). Dense networks foster trust, shared norms, and organizational identity, reducing opportunistic behavior and enhancing team cohesion. These networks also improve adaptability to environmental uncertainty, further strengthening organizational outcomes (Gonzalez-Brambila et al., 2013). Hence,
H3: Network relationships mediate the relationship between transformational leadership and start-up performance.
Transactional leadership demonstrates an inverted U-shaped effect on start-up performance, where initial benefits diminish with over-reliance. Social network theory suggests that network relationships can mitigate these drawbacks by leveraging connections to overcome resource constraints and foster innovation. This study posits that network relationships mediate the link between transactional leadership and start-up performance, alleviating the adverse effects of direct transactional actions. Transactional leaders enhance intra-team networks by emphasizing performance outcomes and the value of knowledge management. By fostering transparent exchange relationships, they promote knowledge sharing and robust internal networks (Chang

& Chuang, 2011). Additionally, task-focused leadership reinforces reciprocity norms, motivating team members to exchange behaviors that strengthen network ties. Intra-team networks significantly boost start-up performance by facilitating knowledge sharing, cohesion, and goal alignment. Strong networks enable the flow of tacit knowledge and critical information, which is essential for resource-limited start-ups (Thomas, 2017). High-density networks enhance team cohesion and a positive work environment, aligning tasks with shared goals. Regular communication and mutual support expand the collective knowledge base, improving expertise sharing and performance outcomes (Leuteritz et al., 2017). Hence,

H4: Network relationships mediate the relationship between transactional leadership and start-up performance.

Transformational leaders reduce entrepreneurial uncertainty by fostering collective efficacy through visionary communication and personal charisma. By aligning team members around shared goals, they mitigate disagreements and enhance confidence in achieving objectives. As role models, transformational leaders guide teams through high-uncertainty tasks, creating a positive work atmosphere that strengthens collective efficacy (Yin et al., 2020). Through intrinsic motivation and individualized care, they deepen employees' understanding of their roles in the entrepreneurial journey, fostering a sense of belonging and focusing on adding value to the organization. High collective efficacy positively impacts start-up performance in several ways. First, it influences task selection, effort, and problem-solving, enabling teams to tackle challenging goals, persevere through difficulties, and reduce conflicts (Gao et al., 2020). Second, from a knowledge management perspective, collective efficacy builds trust, promoting knowledge sharing and collaborative learning. These interactions help start-ups develop and refine their knowledge bases, enhancing performance. Third, teams with strong collective efficacy set and achieve ambitious goals, overcoming resource constraints and the challenges of being "new and small" (Akdere & Egan, 2020). Hence,

H5: Collective efficacy mediates the relationship between transformational leadership and firm performance.

Transactional leadership influences collective efficacy through its focus on task and outcome orientations. Task-oriented leadership clarifies goals, tasks, and processes, laying the foundation for collective efficacy by instilling confidence in the team’s ability to succeed (Hu & Liden, 2011). It also fosters intra-team collaboration and inter-team competition, strengthening team confidence and reinforcing high-performance perceptions (Mulvey & Ribbens, 1999). Outcome-oriented leadership enhances team cohesion and positive emotions, particularly in start-ups with limited regulatory frameworks and emerging organizational cultures. By linking rewards to performance and using persuasion, counseling, and supervision, transactional leaders create a cohesive and motivated team environment, addressing organizational deficiencies and bolstering collective efficacy. Bandura’s theory identifies positive emotional states as crucial for building efficacy, as they boost confidence and drive team behavior. However, as start-ups mature, the limitations of transactional leadership in fostering innovation and entrepreneurship become apparent. While collective efficacy enhances creativity and problem-solving (Gibson & Earley, 2007; Siegel, 2017), excessive reliance on transactional leadership may stifle innovation in more developed organizations. High collective efficacy, aligned with Bandura’s theory, strengthens leader-member exchange relationships, promoting creativity, proactivity, and goal-oriented behavior, ultimately improving organizational performance. Additionally, collective efficacy fosters trust and loyalty, further driving team innovation and creativity (Luo, 2014). Transactional leadership shapes collective efficacy by enhancing cohesion and goal achievement, while its limitations in mature organizations highlight the need for complementary leadership styles. Hence,

H6: Collective efficacy mediates the relationship between transactional leadership and firm performance.

Research Methodology

This study focused on start-up owners and CEOs in Beijing, China, targeting firms established within the past eight years. By the end of 2023, Beijing hosted 1,549 start-ups, accounting for 26% of China's total and ranking sixth globally in the Startup Ecosystem Index (StartupBlink, 2024). As a political, cultural, and entrepreneurial hub, Beijing represents China's start-up landscape. Using Taro Yamane's formula (1967) with a 95% confidence level and a 5% margin of error, the study determined a sample size of 318 respondents to ensure representativeness. Data collection occurred between October and November 2024 through mailed printed questionnaires. Purposive sampling targeted leaders and CEOs, and each package included a cover letter, five questionnaires, a self-addressed stamped envelope for anonymity, and a QR code for online survey access. Of 415 returned questionnaires, 12 were excluded for unreliable responses, leaving 403 valid samples, exceeding the minimum required size (Israel, 1992).

The structured questionnaire was developed from an extensive literature review and adapted to the Chinese context using Brislin's (1970) back-translation method, ensuring linguistic and cultural accuracy through iterative refinements by expert translators (Brislin, 1970). The questionnaire included four sections: First, screening Questions: Two questions verified respondents as Beijing-based start-up owners/CEOs, with "no" responses terminating the survey. Second, demographics: Data on gender, age, and education level were collected. Third, enterprise information covers business size, age, and industry. Finally, key Variables: 47 items measured leadership styles, social capital, collective efficacy, and start-up performance, using validated scales: Transformational Leadership: MLQ-5X (Bass & Avolio, 2005) with 20 items. Transactional Leadership: Scale by Bass & Avolio (2005), 12 items. Internal Network Relationships: Hendricks et al. (2019b), four items. Collective Efficacy: Jex & Bliese (2000), four items. Start-up Performance: Carmeli et al. (2011) and Dong (2014) have six widely accepted items for measuring growth and survival. The structured questions used a 7-point Likert scale, where respondents rated their attitudes.

Research Results

Demographic Characteristics

The start-ups surveyed revealed key trends in leadership and enterprise profiles. Leaders were predominantly male (65.01%) and in their 30s (46.40%), with most holding at least a bachelor's degree (81.63%). Start-ups were primarily 5 to 8 years old (61.79%), with many employing over 100 people (41.69%), indicating substantial growth beyond the early stages. The ecosystem was dominated by Information Technology (70.47%) and Consumer Goods (28.04%), reflecting a focus on innovation and scalability. These findings highlight the start-up landscape's emphasis on young, educated leaders and technology-driven growth.

Reliability and Validity

In this study, Cronbach's Alpha coefficients for all variables exceeded 0.7 (Table 1), meeting the reliability threshold Nunnally (1987) suggested and confirming strong internal consistency. Convergent validity, assessed through Confirmatory Factor Analysis (CFA), evaluates the correlation among items measuring the same construct. According to criteria from Nunnally & Bernstein (1994) and Fornell & Larcker (1981), convergent validity is achieved when standardized factor loadings exceed 0.50, composite reliability (CR) is above 0.70, and average variance extracted (AVE) is more significant than 0.50. The results (Table 1) show that all item factors exceeded 0.5, AVE values surpassed 0.5, and CR values were more significant than 0.7, confirming strong convergent validity for the scales used.

Table 1 Loading Factor and Convergent Validity Test of Formal Scale

Construct		Ustd	S.E.	Z	P	Std. F.L.	C.R.	AVE	Alpha
Transformational Leadership (TML)	TML1	1				0.721	0.941	0.532	0.942
	TML2	1.225	0.072	17.061	***	0.755			
	TML3	1.052	0.06	17.485	***	0.773			
	TML4	1.115	0.067	16.596	***	0.735			
	TML5	1.22	0.072	17.024	***	0.754			
	TML6	1.207	0.073	16.541	***	0.733			
	TML7	1.116	0.067	16.715	***	0.74			
	TML8	1.243	0.075	16.474	***	0.73			
	TML9	1.265	0.077	16.41	***	0.727			
	TML10	1.109	0.069	16.128	***	0.715			
	TML11	1.036	0.065	15.968	***	0.708			
	TML13	1.064	0.067	15.84	***	0.703			
	TML15	0.977	0.061	16.007	***	0.71			
	TML20	1.033	0.065	15.833	***	0.703			
Transactional Leadership (TAL)	TAL1	1				0.727	0.933	0.538	0.935
	TAL2	1.212	0.071	17.045	***	0.753			
	TAL3	1.046	0.06	17.564	***	0.774			
	TAL4	1.108	0.067	16.652	***	0.736			
	TAL5	1.21	0.071	17.056	***	0.753			
	TAL6	1.199	0.072	16.585	***	0.733			
	TAL7	1.111	0.066	16.81	***	0.743			
	TAL8	1.239	0.075	16.573	***	0.733			
	TAL9	1.252	0.076	16.391	***	0.725			
	TAL10	1.089	0.068	15.983	***	0.708			
	TAL11	1.062	0.067	15.963	***	0.707			
	TAL12	0.97	0.06	16.041	***	0.71			
Network Relationship (NR)	NR1	1				0.83	0.910	0.717	0.911
	NR2	1.053	0.053	20.044	***	0.846			
	NR3	1.06	0.052	20.425	***	0.858			
	NR4	1.037	0.051	20.215	***	0.852			
Collective Efficacy (CE)	CE1	1				0.902	0.933	0.777	0.934
	CE2	0.966	0.038	25.29	***	0.87			
	CE3	0.981	0.038	26.1	***	0.883			
	CE4	0.977	0.039	25.333	***	0.871			
Start-Up Performance (SP)	SP1	1				0.739	0.931	0.692	0.932
	SP2	1.108	0.076	14.634	***	0.836			
	SP3	1.135	0.078	14.578	***	0.833			
	SP4	1.16	0.075	15.553	***	0.884			
	SP5	1.092	0.072	15.192	***	0.865			
	SP6	1.063	0.074	14.422	***	0.825			

Note: *P < 0.05; **P < 0.01; ***P < 0.001

Discriminant validity ensures constructs are statistically distinct, and it is assessed here using Fornell and Larcker's (1981) AVE method. Table 2 shows that the square root of each construct's AVE (bolded diagonals) exceeds its correlations with other constructs, confirming

that the measurement model meets Fornell and Larcker's criteria and exhibits strong discriminant validity.

Table 2 Discriminant Validity

	TML	TAL	NR	CE	SP
TML	**0.729**				
TAL	-0.279	**0.733**			
NR	0.467	-0.337	**0.847**		
CE	0.486	-0.359	0.486	**0.881**	
SP	0.434	-0.385	0.396	0.504	**0.832**

Note: The diagonal bolded value is the square root of the AVE value

Main Effect Testing

Using SPSS PROCESS (Hayes Model 4) with 5,000 iterations, regression and bootstrapping results (Table 3) reveal that transformational leadership positively and significantly influences start-up performance ($\beta = 0.596$, $p < 0.001$, CI [0.526, 1.187], excluding 0), supporting H1. Transformational leadership also demonstrated positive effects on network relationships ($\beta = 0.55$, $p < 0.001$, CI [0.421, 0.594], excluding 0) and collective efficacy ($\beta = 0.38$, $p < 0.001$, CI [0.217, 0.389], excluding 0). Additionally, both network relationships ($\beta = 0.36$, $p < 0.001$, CI [0.123, 0.315], excluding 0) and collective efficacy ($\beta = 0.52$, $p < 0.001$, CI [0.271, 0.409], excluding 0) significantly enhanced start-up performance. These findings underscore the pivotal roles of network relationships and collective efficacy as mediators between transformational leadership and start-up performance.

Table 3 Main Effect Test of Transformational Leadership and Start-Up Performance

Construct	Network Relationship			Collective Efficacy			Start-Up Performance		
	β	**LLCI**	**ULCI**	**β**	**LLCI**	**ULCI**	**β**	**LLCI**	**ULCI**
TML	0.55***	0.421	0.594	0.38***	0.217	0.389	0.20***	0.114	0.275
NR							0.36***	0.123	0.315
CE							0.52***	0.271	0.409
TML→SP	Total Effect			Boot S. E			P	LLCI	ULCI
	0.596			0.17			***	0.526	1.187
Indicator	$R^2 = 0.244$			$R^2 = 0.313$			$R^2 = 0.349$		
	F = 26.539***			F = 31.147***			F = 31.199***		

Note: ***p < 0.001, **p < 0.01, *p < 0.05

Bootstrapping results (Table 4) confirmed a significant negative effect of the squared term of transactional leadership on performance ($\beta = -0.591$, $p < 0.001$, CI [-0.434, -0.119], excluding 0), indicating an inverted U-shaped relationship. The squared term of transactional leadership also negatively influenced network relationships ($\beta = -0.35$, $p < 0.001$, CI [-0.382, -0.221], excluding 0) and collective efficacy ($\beta = -0.26$, $p < 0.001$, CI [-0.203, -0.054], excluding 0). Nevertheless, network relationships ($\beta = 0.43$, $p < 0.001$, CI [0.076, 0.248], excluding 0) and collective efficacy ($\beta = 0.42$, $p < 0.001$, CI [0.235, 0.419], excluding 0) maintained positive and significant effects on performance. Further analysis validated the robustness of the inverted U-shaped relationship. The slope for low levels of transactional leadership (TRLLOW = 1) was positive ($\beta = 2.84$, $p < 0.001$, CI [2.326, 3.167], excluding 0), while for high levels (TRLHIGH = 7), it was negative ($\beta = -2.69$, $p < 0.001$, CI [-2.992, -2.363], excluding 0). These results confirm the inverted U-shaped effect of transactional leadership on start-up performance.

Table 4 Main Effect Test of Transactional Leadership and Start-Up Performance

Construct	Network Relationship			Collective Efficacy			Start-Up Performance		
	β	**LLCI**	**ULCI**	**β**	**LLCI**	**ULCI**	**β**	**LLCI**	**ULCI**
TAL	1.63***	1.161	2.124	.75 ***	.295	1.127	2.39	1.922	2.756
Sqt of TAL	-.35***	-.382	-.221	-.26***	-.203	-.054	-.33***	-.391	-.145
NR							.43***	.076	.248
CE							.42***	.235	.419
TAL→SP	Total Effect			Boot S. E			P	LLCI	ULCI
	-0.591			0.06			***	-0.434	-0.119
Indicator	R^2 = 0.314			R^2 = 0.479			R^2 = 0.519		
	F = 12.567***			F = 21.807***			F = 51.706***		

Note: ***p < 0.001, **p < 0.01, *p < 0.05; Sqt: Squared Term

Conclusion and Discussion

Leadership Theory and Upper Echelons Theory emphasize the critical role of leaders in shaping employee innovation and achieving organizational performance. Building on these frameworks, this study explores the relationship between entrepreneurial leadership styles—transformational and transactional leadership—and start-up performance, addressing inconsistencies in previous research findings (Chen, 2019; Shao et al., 2017).

First, results confirm a significant positive relationship between transformational leadership and start-up performance. Transformational leadership benefits start-ups by addressing resource constraints and market entry challenges. Inspiring employees with a compelling vision and fostering belonging enhances organizational citizenship behavior and self-expectations, driving improved performance (Cheewakoset & Sakdapat, 2024). Additionally, it enables efficient resource allocation, mitigating resource scarcity and inefficiency for sustainable growth. Second, the study identifies an inverted U-shaped relationship between transactional leadership and start-up performance, where performance peaks at a threshold level of transactional leadership but diminishes beyond this point. Initially, transactional leadership fosters performance by clarifying roles, establishing accountability, and leveraging contingent rewards to achieve organizational goals, especially during the early stages of start-ups. These findings align with Shao et al. (2017), highlighting the situational effectiveness of transactional leadership based on an organization's life cycle. However, as start-ups mature, the rigid structure of transactional leadership can hinder innovation and long-term growth. Beyond the threshold, the negative correlation suggests that excessive transactional behaviors suppress creativity and entrepreneurial opportunity exploration (Afsar et al., 2016; Jia et al., 2018). This dynamic underscores start-ups' need to transition toward leadership styles that inspire innovation and adaptability in later growth stages. Third, results confirm the significant positive effect of network relationships on start-up performance. In today's dynamic digital economy, start-ups embedded in network environments gain competitive advantages by exchanging knowledge, skills, and technologies through their networks. These relationships help overcome the limitations of small scale and new entry, transforming external knowledge into opportunities and driving high performance (Hendricks et al., 2019b). Both transformational and transactional leadership styles significantly influence network relationships. Transformational leadership has a strong positive impact, while transactional leadership has a more minor yet notable effect. Effective leadership establishes goal alignment and operational guidance, fostering robust network ties and contributing to start-up growth. Fourth, network relationships fully mediate the relationship between entrepreneurial leadership and start-up performance. Transformational leadership enhances performance through network ties, with stronger transformational traits yielding better network effectiveness and improved outcomes. Similarly, transactional leadership's effect on performance is mitigated through

network relationships. These findings demonstrate that leadership impacts on performance are closely tied to network mechanisms. Furthermore, empirical results reveal a strong positive impact of collective efficacy on start-up performance. This is consistent with Social Capital Theory's view that leveraging social capital embedded in network environments enhances creativity, confidence, and trust within teams. Collective efficacy, defined as shared beliefs and expectations (Jex & Bliese, 2000), serves as a mechanism to connect team members and transform social capital into entrepreneurial opportunities, thereby driving improved performance. In addition, transformational and transactional leadership significantly contribute to collective efficacy. Transformational leaders enhance collective efficacy through social persuasion and guidance, fostering trust and mitigating uncertainties in entrepreneurial settings. Transactional leaders, while less effective in direct performance impacts, strengthen team cohesion and belief in task completion by shaping team members' psychological perceptions, compensating for their limited long-term influence on firm performance.

Finally, collective efficacy mediates the relationship between entrepreneurial leadership styles and start-up performance. Transformational leadership's mediating effect through collective efficacy is significant, with stronger transformational traits fostering higher collective cognition and better performance outcomes. Similarly, transactional leadership's mediation through collective efficacy is validated, suggesting that collective efficacy offsets the adverse effects of transactional leadership on performance, ultimately benefiting start-up growth.

References

Afsar, B., Badir, Y., & Kiani, U. (2016). Linking transactional leadership and employee innovation: The moderating role of psychological empowerment. *Journal of Business Research, 69*(10), 3234-3240.

Akdere, M., & Egan, T. (2020). Transformational leadership and human resource development: Linking employee learning, job satisfaction, and organizational performance. *Human Resource Development Quarterly, 31*(4), 393-421.

Alshanty, A., & Emeagwali, O. (2019). Entrepreneurial leadership, competitive advantage, and strategic thinking. *Management Research Review, 42*(10), 1136-1152.

Bass, B., & Avolio, B. (2005). *Multifactor Leadership Questionnaire (MLQ-5X)*. California: Mind Garden, Inc.

Bass, B., Avolio, B., Jung, D., & Berson, Y. (2003). Predicting unit performance by assessing transformational and transactional leadership. *Journal of Applied Psychology, 88*(2), 207-218.

Bonini, S., Gorner, S., & Jones, A. (2024). Leadership and adaptive performance: A meta-analytic investigation. *Journal of Management, 50*(2), 345-370.

Boukamcha, F. (2019). The effect of transformational leadership on corporate entrepreneurship in Tunisian SMEs. *Leadership & Organization Development Journal, 40*(3), 286-304.

Brislin, R. (1970). Back-Translation for Cross-Cultural Research. *Journal of Cross-Cultural Psychology, 1*(3), 185-216.

Burmeister, A. (2020). How transformational leaders facilitate knowledge transfer: The role of internal communication. *Knowledge Management Research & Practice, 18*(2), 201-215.

Carmeli, A., Meitar, R., & Weisberg, J. (2011). Self-leadership skills and innovative behavior at work. *International Journal of Manpower, 32*(1), 81-98.

Chang, C., & Chen, Y. (2017). The impact of leadership style on firm performance: Transformational and transactional approaches. *Journal of Business Research, 79*, 234-245.

Chang, H., & Chuang, S. (2011). Social capital and individual motivations on knowledge sharing: Participant involvement as a moderator. *Information & Management, 48*(1), 9-18.

Cheewakoset, R., & Sakdapat, N. (2024). Financial Skills, Entrepreneurial Qualities, and Leadership Qualities that Influence the Preparatory Behaviours for Business Competition of Undergraduate Students in Thailand. *International Journal of eBusiness and eGovernment Studies, 16*(1), 203-222.

Cheewakoset, R., Ngamcharoen, P., & Sakdapat, N. (2024). Causal Relationship Model of Quality of Work Life and Leadership Skills Affecting Good Organizational Citizenship Behavior: A Case Study of Public Companies in Thailand. *International Journal of eBusiness and eGovernment Studies, 16*(2), 114-132.

Chen, X. (2019). Curvilinear effects of transformational leadership on employee performance: The role of psychological empowerment. *Journal of Management, 45*(5), 2047-2068.

Chen, Z., Li, H., & Xue, Y. (2018). Transformational leadership and team learning: The mediating role of knowledge sharing. *Leadership & Organization Development Journal, 39*(4), 454-467.

China Briefing. (2023). *China startup landscape: Industries, investment, and incentive policies*. Beijing: China Briefing.

Dong, Y. (2014). The impact of entrepreneurial leadership on innovation performance: The mediating role of organizational learning. *International Journal of Entrepreneurial Behavior & Research, 20*(5), 430-448.

Fornell, C., & Larcker, D. (1981). Evaluating Structural Equation Models with Unobservable Variables and Measurement Error. *Journal of Marketing Research, 18*(1), 39-50.

Gao, Y., Wang, Y., & Liu, X. (2020). The impact of collective efficacy on team performance: A multilevel analysis. *Frontiers in Psychology, 11*, 1-10.

Gibson, C., & Earley, P. (2007). Collective efficacy: A theoretical and empirical review. In C. Cooper, & J. Barling. (eds.). *The SAGE handbook of organizational behavior: Volume I-Micro approaches* (pp. 314-334). California: SAGE Publications.

Gonzalez-Brambila, C., Veloso, F., & Krackhardt, D. (2013). The impact of network embeddedness on research output. *Research Policy, 42*(1), 155-166.

Gottfredson, R., & Aguinis, H. (2017). Leadership behaviors and follower performance: Integrating knowledge and closing gaps. *Academy of Management Annals, 11*(1), 579-632.

Gottfredson, R., Wright, L., & Heaphy, E. (2017). The role of team network ties in explaining the impact of leadership on team performance. *Leadership Quarterly, 28*(3), 437-454.

Granovetter, M. (1992). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology, 91*(3), 481-510.

Hendricks, J., Chow, I., & Ding, Z. (2019a). The role of high-density networks in knowledge creation and team performance. *Journal of Business Research, 102*, 234-246.

Hendricks, K., Singhal, V., & Zhang, R. (2019b). The effect of supply chain glitches on shareholder wealth. *Journal of Operations Management, 27*(3), 233-246.

Hinkin, T. (2008). A brief tutorial on the development of measures for use in survey questionnaires. *Organizational Research Methods, 1*(1), 104-121.

Hu, J., & Liden, R. (2011). Antecedents of team potency and team effectiveness: An examination of goal and process clarity and servant leadership. *The Leadership Quarterly, 22*(5), 935-946.

Huang, K., & Provan, K. (2007). Structural embeddedness and team effectiveness: An empirical examination. *Academy of Management Journal, 50*(2), 379-398.

Israel, G. (1992). *Determining Sample Size*. Florida: University of Florida.

Jex, S., & Bliese, P. (2000). Efficacy beliefs in dynamic work teams. *Personnel Psychology, 53*(3), 569-598.

Jia, Y., Zhang, Y., & Zhang, Y. (2018). The relationship between leadership styles and organizational innovation: A systematic literature review and narrative synthesis. *International Journal of Management Reviews, 20*(4), 565-591.

Jiang, Y., & Chen, C. (2018). Goal alignment and knowledge sharing in teams: The role of transformational leadership. *Team Performance Management, 24*(5/6), 269-287.

Kang, S. (2018). Social capital and entrepreneurial outcomes: The moderating role of market conditions. *Entrepreneurship Theory and Practice, 42*(1), 105-123.

Kelemen, T., Matthews, S., & Matthews, M. (2020). When does gender diversity enhance team performance? The dual need for transformational leadership and team tenure. *Journal of Applied Social Psychology, 50*(9), 501-511.

Leuteritz, C., Hensellek, S., & Möslein, K. (2017). The role of team cohesion in the relationship between team diversity and team performance. *Journal of Business Research, 70*, 216-226.

Luo, Y. (2014). *Guanxi and business*. Singapore: World Scientific Publishing Company.

Minhas, R., & Sindakis, S. (2020). Implications of social cohesion in entrepreneurial collaboration: A systematic literature review. *Journal of the Knowledge Economy, 13*, 2760-279.

Mulvey, P., & Ribbens, B. (1999). The effects of intra- and intergroup conflict on work teams. *International Journal of Conflict Management, 10*(4), 360-378.

Nunnally, J. (1987). *Psychometric Theory*. 2nd ed. New York: McGraw-Hill.

Nunnally, J., & Bernstein, I. (1994). *Psychometric Theory*. 3rd ed. New York: McGraw-Hill.

Sanz-Blas, S., Bigné, E., & Currás-Pérez, R. (2021). The role of social capital in firm innovation: A multi-level analysis. *Journal of Small Business Management, 59*(2), 341-365.

Shahzad, F., Xiu, G., & Shahbaz, M. (2022). Transformational leadership and firm performance: The mediating role of corporate sustainability and the moderating role of innovation. *Sustainability, 14*(3), 1234.

Shao, P. (2017). Transactional leadership and innovative work behavior: A study on the role of organizational support. *Leadership & Organization Development Journal, 38*(2), 254-269.

Shao, P., Sun, J., & Peng, K. (2017). Curvilinear effects of leadership on team creativity: A moderated mediation model. *Leadership Quarterly, 28*(5), 724-739.

Siegel, C. (2017). Does transactional leadership count for team innovativeness? The moderating role of emotional labor and the mediating role of team efficacy. *Academy of Business and Economics Journal, 17*(1), 1-15.

StartupBlink. (2024). *The Startup Ecosystem of Beijing*. Retrieved from www.startupblink.com/startup-ecosystem/beijing-cn?utm=&page=1.

Thomas, K. (2017). Intrateam communication and support relationships: Their impact on team identification and collective efficacy. *Journal of Organizational Behavior, 38*(3), 423-440.

Ting, S., Kim, D., & Park, S. (2021). Leadership in start-up teams: Impact on innovation and team performance. *Small Business Economics, 57*(2), 483-502.

Tung, R., Worm, V., & Fang, T. (2016). Sino-Western business negotiations revisited — 30 years after China's open-door policy. *Organizational Dynamics, 45*(1), 50-56.

Xie, J. (2018). The role of transformational leadership in promoting team learning and innovation. *Journal of Business and Psychology, 33*(3), 289-303.

Yamane, T. (1967). *Statistics: An Introductory Analysis*. 2nd ed. New York: Harper and Row.

Yin, Z., Wang, L., & Zhang, Y. (2020). Transformational leadership and collective efficacy: The mediating role of team cohesion. *Frontiers in Psychology*, *11*, 1-10.

Zhang, Z., & Kim, T. (2020). The team-level impact of leadership on organizational effectiveness: A meta-analysis. *Academy of Management Proceedings*, (1), 147-153.

Data Availability Statement: The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

Conflicts of Interest: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's Note: All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.