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Inspecting the Influence of Transformational Leadership on Entrepreneurial Performance in Regional Development Project Companies

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ABSTRACT

This study examines the impact of transformational leadership on entrepreneurial performance, focusing on five fundamental leadership dimensions. A quantitative research methodology was adopted, employing a structured questionnaire to operationalise transformational leadership in alignment with the study's objectives. A deductive approach was utilised to formulate hypotheses. The research sample comprised 380 employees from Regional Development Project Companies in Karbala, selected through a random sampling technique. The findings indicate that idealised influence exerts the strongest effect on entrepreneurial performance. Additionally, both inspirational motivation and individualised consideration produced significant estimates, highlighting the importance of addressing employees' unique needs. Intellectual stimulation also exhibited a positive association with entrepreneurial performance, underscoring the necessity of fostering innovative thinking within the workforce. Moreover, empowerment emerged as a critical factor in enhancing entrepreneurial outcomes. Statistical analyses supported these conclusions, with goodness-of-fit indices confirming a well-calibrated model (GFI = 0.908, AGFI = 0.907, IFI = 0.920, χ^2 = 2.1, RMSEA = 0.071, P = 0.00). These metrics validate the model's statistical soundness. As a result, Regional Development Project Companies should prioritise these transformational leadership dimensions to improve entrepreneurial performance. By equipping both current and emerging leaders with transformational leadership capabilities, organisations can enhance overall performance, drive innovation, and improve adaptability to changing environmental conditions.

1. Introduction

In a dynamic and continuously evolving economic environment, entrepreneurs endeavor to enhance both their performance and the efficiency of their workforce to achieve organizational

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objectives [1]. This objective necessitates the implementation of effective human resource management strategies and practices, which are instrumental in shaping entrepreneurial performance [2]. Human resource practices directly influence employee motivation and job satisfaction, while competent leadership and structured management approaches contribute to improvements in product and service quality, productivity, and overall profitability [3]. A thorough examination of the literature on leadership and the various determinants of entrepreneurial performance highlights transformational leadership and its dimensions as critical factors in determining an organization's success or failure [4]. Transformational leadership has gained prominence as a key approach for improving entrepreneurial performance, particularly within organizations involved in regional development initiatives, where innovation, adaptability, and collaboration are essential [5-7]. Transformational leaders motivate their subordinates to engage with and explore both established and emerging perspectives, fostering a culture of continuous growth and innovation [8].

Transformational leadership is expected to exert a substantial influence on the entrepreneurial performance of regional development project companies. Specifically, transformational leaders should be capable of mobilizing and enhancing their colleagues' motivation, fostering a culture of creativity and collaboration, and advocating a well-defined and compelling strategic vision [9]. However, the precise extent of this leadership style's impact on entrepreneurial performance within this context remains insufficiently explored. This study aims to address this critical gap by examining the influence of transformational leadership dimensions on the entrepreneurial performance of regional development project firms. These organizations encounter significant challenges in sustaining and improving their entrepreneurial performance, as they operate in highly complex and dynamic environments that demand effective management and adaptability to change.

Accordingly, this research is guided by the following question: What is the impact of transformational leadership on the entrepreneurial performance of Karbala's Regional Development Project Companies? Entrepreneurial performance is a key determinant of enterprise success, contributing to economic growth, job creation, and the resolution of social and environmental challenges. Thus, understanding and enhancing entrepreneurial performance is essential for policymakers, investors, and other stakeholders committed to fostering entrepreneurship and its broader societal impact [10; 11]. The study offers concrete recommendations for leaders and practitioners in regional development while also testing and validating existing theoretical models of transformational leadership. By applying these models to a new organizational context, the research contributes empirical evidence regarding their generalizability and effectiveness across various industries and sectors. Leaders can utilize these findings to refine their leadership approaches, optimizing employee engagement and productivity. This article adopts a structured approach, commencing with a literature review that establishes the theoretical framework. The subsequent section delineates the research methodology, followed by a critical analysis of the findings and their interpretations. Finally, the study concludes with key recommendations and practical implications for leadership development within regional development project companies.

2. Literature review

In the contemporary business environment, organizations are continuously evolving in response to rapid technological advancements. Within this dynamic context, where innovation is paramount, transformational leadership plays a critical role in motivating employees to embrace change [12]. As a leadership approach, transformational leadership encourages managers and business leaders to inspire employees to innovate and develop problem-solving capabilities [5]. This leadership style promotes innovation-driven growth. Transformational leaders inspire employees by promoting

innovation and autonomy. Thus, management leadership evolves into transformational leadership [13].

Transformational leadership is fundamental to driving organizational change, fostering progress, and achieving targeted performance outcomes. It is a key determinant of entrepreneurial performance, with four primary dimensions encapsulating the core behaviors of exemplary leaders that are recognized globally [14; 15]. The relationship between transformational leadership and entrepreneurial performance has been extensively examined, with researchers providing empirical evidence to elucidate the connections based on various criteria [1; 4; 6]. Studies indicate that transformational leaders cultivate strong relationships with their subordinates, significantly influencing their performance [16]. By reinforcing the emotional connection between managers and employees, transformational leadership instils confidence, motivating individuals to exceed expectations [17]. Executives who employ visionary incentives provide meaning to their organizations and their employees' roles. Such leaders create a supportive work environment, enhance customer service efficiency, strengthen organizational performance, and generate value for shareholders [18-20]. As highlighted in the literature, transformational leadership contributes—both directly and indirectly—to various entrepreneurial performance indicators while aligning with human resource management perspectives [1; 4].

2.1 Transformational Leadership

Transformational leadership entails empowering employees through increased task delegation and the provision of essential resources and support to facilitate their success [21]. This leadership style emphasizes skills development and the growth of team members while fostering a cooperative culture, creativity, and a commitment to excellence. By promoting innovation-driven performance, transformational leadership contributes significantly to organizational success [22]. A key characteristic of transformational leadership is its ability to inspire and motivate employees to achieve exceptional performance [23; 24]. Transformational leadership actively engages employees in the implementation of strategies aimed at continuous improvement, innovation, and sustainable growth [25; 26]. Moreover, it prioritizes the development and well-being of employees, ensuring they realize their full potential within the organization [27; 28].

Transformational leadership enhances entrepreneurial performance by supporting the achievement of long-term objectives and improving the effectiveness of operational teams [29]. It also strengthens employee retention while reducing turnover, thereby lowering recruitment and training costs [3]. By fostering informed decision-making and encouraging critical thinking, transformational leaders facilitate effective problem-solving processes [30]. Additionally, this leadership approach improves customer satisfaction by establishing a positive work environment and ensuring the delivery of high-quality products and services. Transformational leaders are socially responsible, which enhances their organization’s reputation and attracts socially conscious customers and employees [31]. The overarching goal of transformational leadership is to drive outstanding entrepreneurial performance by creating a positive and productive workplace. This is achieved through the articulation of a clear vision, the empowerment and development of employees, and leading by example [32]. Scholars assert that transformational leadership seeks to establish an inspiring vision that aligns with the mission and operational practices of public institutions [7; 23]. Furthermore, it fosters employee empowerment by granting autonomy and support, leading to enhanced performance outcomes [33]. Transformational leadership facilitates employee development by providing the necessary resources for individuals to maximize their potential [7; 34]. Transformational leaders set a positive example, encouraging employees to embody expected values and behaviors [35]. Transformational leadership is distinguished by its emphasis on effective

communication, innovation, and the dissemination of a clear, inspiring, and well-defined vision that fosters a collaborative and motivating work environment [36].

2.1.1 Leadership Skills

The researchers introduce an advanced transformational leadership paradigm to enhance individual performance and mentorship [37; 38], addressing gaps in Burns' earlier work [39]. Leadership theories stem from two perspectives: one linking leader traits and behaviors to performance, examined via the Full Range Leadership Model [39; 40]. Transactional and transformational leadership, part of the Full Range Leadership Theory, was developed by [37] as an innovative benchmarking tool using the Multifactor Leadership Questionnaire (MLQ) [41]. This theory aims to identify effective leaders without prior tools. The LMX theory emphasizes exchange relationships between managers and followers [42], fostering interdependent behaviors and shared outcomes [43; 44]. Leaders communicate role expectations and provide compensation accordingly [45].

2.1.2 Dimensions of Transformational Leadership

Transformational leadership fosters positive change within an organization by cultivating a strong foundation of mutual understanding, respect, and trust. It emphasizes recognizing and addressing employees' strengths and weaknesses to enhance overall effectiveness [37; 38]. Additionally, transformational leadership promotes continuous learning and development by investing in skills and knowledge acquisition, thereby fostering a culture of excellence and sustained growth [23; 39; 46].

2.1.3 Idealized Influence

Idealized influence in transformational leadership reflects a leader's ability to inspire followers to recognize their potential and contribute to organizational success [47]. This influence is characterized by a shared vision and intellectual stimulation, encouraging employees to think creatively and challenge existing assumptions, thereby fostering innovation and growth [38]. As a key element of transformational leadership, idealized influence pertains to the leader's exemplary role, positioning them as a model for their colleagues. A transformational leader is perceived as possessing charismatic qualities that reinforce trust and admiration within their team. This component enables leaders to guide behaviors towards a collective ideal, which is essential for achieving business objectives [48]. Idealized influence encompasses both leader behavior and follower development, with transformational leaders serving as positive role models who enhance trust and job satisfaction [51]. Emotional intelligence and intellectual stimulation further support effective communication and encourage creative thinking [48].

Idealized influence plays a pivotal role in transformational leadership by inspiring followers, fostering their development, and motivating them towards the achievement of organizational goals [3; 38]. Leaders who exhibit idealized influence demonstrate ethical behavior and uphold strong values, which engender trust and respect among employees, thereby enhancing entrepreneurial performance. By embodying the organization's ideals and aspirations, they cultivate a sense of pride and loyalty within their teams. This influence strengthens employee engagement and alignment with the company's vision, ultimately leading to improved entrepreneurial performance. Empirical evidence confirms that the idealized influence of transformational leaders significantly enhances employee engagement, contributing to superior entrepreneurial outcomes. Accordingly, the following hypothesis is proposed [47; 49; 50].

H1. Idealized influence significantly statistically influences entrepreneurial performance (p-value <0.05).

2.1.4 Inspirational Motivation

Inspirational motivation, a key aspect of transformational leadership, positively influences followers' job satisfaction, organizational commitment, and performance, while fostering innovative behavior [46; 47; 51]. It reflects a leader's communication skills and passion, conveying a compelling vision that drives commitment and loyalty, particularly in B2B contexts [52]. Leaders achieve this through eye contact, high expectations, and personalized support Chebon et al. [49], enhancing followers' motivation [53]. By using symbols and metaphors, they inspire employees to exceed expectations and invest fully in their tasks. This motivation stimulates innovation and proactivity, strengthening entrepreneurial performance. Hence, the following hypothesis is formulated [38; 39; 47].

H2. Inspirational motivation has a significant statistical influence on entrepreneurial performance (p-value <0.05).

2.1.5 Intellectual Stimulation

Intellectual stimulation is a fundamental component of transformational leadership, providing guidance and strategic insights to enhance leaders' intellectual capital. Through these consultative processes, leaders are encouraged to think creatively and develop innovative strategies for organizational change, ultimately fostering increased innovation, improved decision-making, and enhanced problem-solving capabilities [54]. Transformational leaders promote reflective thinking and creativity, both of which are invaluable in competitive B2B markets where innovation serves as a key differentiator [55]. This dimension underscores the significance of intellectual capital within transformational leadership, as investment in intellectual resources can generate substantial value for organizations [56].

Intellectual consultancy plays a pivotal role in organizational learning by offering access to new knowledge and insights. Consulting firms specializing in intellectual development support organizations and leaders in strengthening their intellectual capital through services such as knowledge management, innovation consulting, and strategic planning [57]. Intellectual stimulation entails leaders encouraging employees to critically evaluate existing processes, think innovatively, and address complex challenges using creative solutions. Transformational leaders cultivate a culture of continuous learning by fostering critical thinking and originality. This leadership dimension is essential for driving innovation and ensuring rapid adaptation to evolving market conditions. Moreover, intellectual stimulation enhances entrepreneurial performance by promoting agility and responsiveness to change. Based on these insights, the following hypothesis is proposed [47; 55; 57].

H3. Intellectual stimulation has a significant statistical influence on entrepreneurial performance (p-value <0.05).

2.1.6 Individualized Consideration

Individualized consideration in leadership plays a crucial role in fostering positive outcomes for both organizations and society [58]. This leadership approach contributes to the development of a diverse and inclusive workplace while enhancing the well-being of employees and leaders by addressing individual needs and interests. By prioritizing personalized support, leaders can alleviate stress and anxiety, thereby generating broader societal benefits [59]. Individualized consideration is exemplified through a leader's commitment to the personal development of each employee. By tailoring their approach to accommodate individual needs and aspirations, leaders foster a significant increase in productivity and job satisfaction [60]. Leaders who priorities individual development can inspire their subordinates, cultivating a supportive and inclusive work environment. Furthermore, this leadership approach has the potential to promote a more equitable and socially responsible society

[61]. Characterized by personalized attention and support, individualized consideration enables leaders to help employees realize their full potential by recognizing and responding to their unique needs [62]. In an entrepreneurial setting, this tailored approach enhances employee satisfaction, retention, and engagement. Empirical studies indicate that individualized consideration positively influences employee satisfaction and retention, which in turn contributes to improved entrepreneurial performance. Accordingly, the following hypothesis is proposed [1; 4; 47].

H4. Individualized consideration has a significant statistical influence on entrepreneurial performance (p-value <0.05).

2.1.7 Empowerment

Empowerment is a leadership approach that grants employees the authority, resources, and opportunities to exercise control over their work and decision-making processes. This approach positively influences employee behavior and organizational outcomes by fostering increased creativity and innovation [63-65]. Furthermore, empowerment enhances the performance of public institutions by strengthening their capacity for innovation and overall effectiveness [66]. More broadly, empowerment represents a leadership style that cultivates workforce creativity and engagement, ultimately contributing to the achievement of organizational objectives [67]. Empowerment entails leaders delegating greater responsibilities to employees while granting them the autonomy to make critical decisions. Transformational leadership inherently promotes empowerment by leveraging employees' intrinsic motivation and enhancing their productivity. This approach accelerates decision-making processes and fosters a culture of initiative and innovation. Empirical studies indicate that empowerment significantly increases intrinsic motivation and productivity, thereby improving entrepreneurial performance. Based on these findings, the following hypothesis is proposed [63; 64; 68].

H5. Empowerment has a significant statistical influence on entrepreneurial performance (p-value <0.05).

2.2 Entrepreneurial Performance

Entrepreneurial performance goals encompass the specific objectives that entrepreneurs establish to ensure long-term business success. Entrepreneurial performance is defined as an entrepreneur's capacity to identify and capitalize on opportunities, allocate resources efficiently, and adapt to dynamic business environments [69]. Empirical evidence indicates that entrepreneurial performance is assessed based on the value created for stakeholders and is measured through financial returns, social impact, and environmental sustainability [70; 71]. Entrepreneurial performance can be enhanced through an entrepreneur's ability to leverage competitive advantages by fostering innovation and responding effectively to market changes. It reflects the entrepreneur's proficiency in achieving strategic objectives [72; 73]. Performance indicators are utilized to assess the effectiveness of strategies aimed at improving entrepreneurial outcomes. These indicators encompass various dimensions of business success, including financial growth, innovation, and social impact [74]. Entrepreneurial performance is evaluated through both objective and subjective measures, such as profitability, return on investment, market share, customer satisfaction, and brand reputation. These metrics serve as benchmarks for assessing the efficiency and effectiveness of entrepreneurial ventures in generating and delivering value to stakeholders [75].

Entrepreneurial performance objectives may include enhancing product quality, reducing costs, and increasing employee productivity. Additionally, these goals often involve adopting innovative strategies to maintain competitive advantages, fostering strong partnerships with suppliers and stakeholders, and establishing a reputable brand presence [76]. Research suggests that

entrepreneurial performance is influenced by employee satisfaction and empowerment, which can be enhanced through transparent communication strategies [70]. Furthermore, the implementation of leadership development programmers has been shown to improve team performance and productivity [71; 72]. Diversity and inclusion within the workplace also play a crucial role in shaping entrepreneurial performance by promoting a culture of collaboration and setting measurable goals to track progress [76]. Decision-making skills are enhanced when entrepreneurs actively seek diverse perspectives and incorporate feedback from team members, leading to improved entrepreneurial outcomes [77]. Empirical analyses suggest that performance improvement is achieved through the establishment of clear expectations and continuous progress monitoring [78]. Consequently, entrepreneurs must develop a diverse skill set, including creativity, leadership, strategic thinking, risk management, and financial acumen, to optimize performance and ensure sustainable success [76; 77; 79]. The conceptual framework is based on an adapted model that underscores the unique characteristics of transformational leaders. According to this approach, transformational leaders exhibit distinct traits that inspire and motivate their subordinates to pursue ambitious objectives. These leaders play a pivotal role in facilitating organizational change and fostering a culture of innovation by encouraging employees to exceed expectations and embrace continuous development [37; 38].

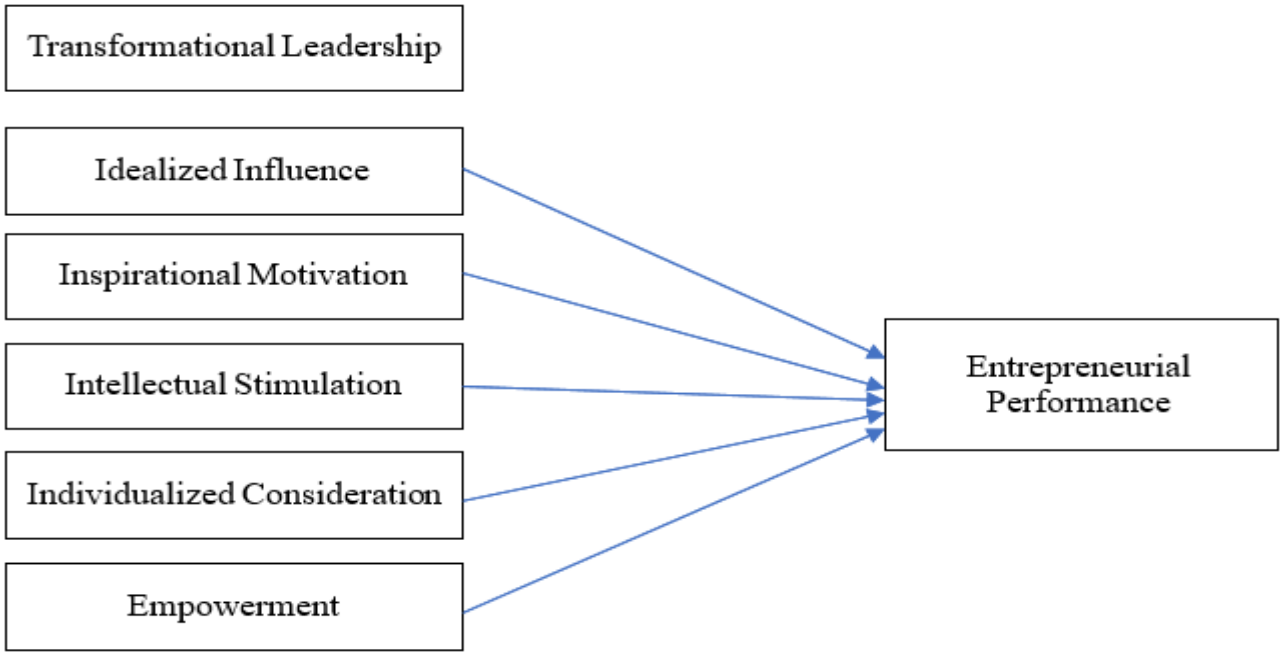

Fig.1. Conceptual Framework

3. Research Methodology

This quantitative study examines the impact of transformational leadership on entrepreneurial performance. A descriptive design was used to assess five TL dimensions, with hypotheses formulated based on literature and tested via correlation and linear regression analyses, aligning with a predictive correlational design. A questionnaire provided quantifiable data, enabling hypothesis verification and capturing responses from a large sample of employees in Regional Development Project Companies in Karbala efficiently. To achieve research objectives, concepts were operationalized, transforming abstract constructs into measurable phenomena. In other words, the selected variables must be both manageable and quantifiable. To ensure consistency and reliability, a pre-validated questionnaire was employed to measure the chosen variables. This questionnaire comprised statements directly related to the concepts under investigation [12].

Data collection was conducted through an online questionnaire survey. To ensure the validity of the instrument, five specialized academics reviewed the questionnaire to assess the relevance and clarity of the items in capturing the intended constructs [17]. Prior to the final study, a pilot test was conducted with one company, which was subsequently excluded from the main analysis. This pre-test phase aimed to contextualize and refine the questionnaire for enhanced accuracy and applicability. The study focused on regional development project companies in Karbala, encompassing various sectors. TL was assessed using a validated 30-item scale [37; 38]. The TL construct comprised five dimensions: Idealized Influence (II) (five items), Inspirational Motivation (IM) (five items), Intellectual Stimulation (IS) (five items), Individualized Consideration (IC) (five items), and Empowerment (E) (five items) [80]. Each item was rated on a five-point Likert scale, ranging from (1) "Strongly Disagree" to (5) "Strongly Agree." A similar five-point scale was applied to measure entrepreneurial performance, which consisted of ten items [72; 73; 77]. The total study population consisted of 4,960 employees working in regional development project companies in Iraq. The sample size was determined using the simple random sampling technique formula [81], resulting in a minimum required sample of 370 respondents. To enhance data accuracy and minimise error rates, 380 valid responses were collected. The sample exclusively included employees from Regional Development Project Companies in Karbala. Descriptive statistical analyses were conducted using SPSS to evaluate the significance of each construct and its corresponding items.

4. Findings and Interpretations

4.1 Descriptive Statistics

The main dimensions of transformational leadership met the established standard, with the mean values exceeding the benchmark of 3.4. Entrepreneurial performance attained a mean of 3.7, surpassing the threshold of 3.5. The arithmetic mean suggests that perceptions are generally positive across all dimensions. Standard deviations indicate moderate variability, reflecting some dispersion in responses. The positive skewness of the data suggests a tendency toward agreement, while kurtosis values close to zero indicate distributions that approximate normality. These findings highlight areas that may require further attention, particularly dimensions with lower mean scores or higher standard deviations, such as "Individualized Consideration."

The assessment of the transformational leadership dimensions reveals overall positive perceptions. Idealized influence achieved a mean score of 3.7 with a standard deviation of 0.72, indicating a high evaluation but moderate variability, reflecting diverse respondent opinions. The slightly positive skewness suggests that while most responses clustered around the mean, there was still some variation. To enhance idealized influence, efforts should focus on ensuring more consistent perceptions across the organization. Similarly, inspirational motivation recorded a mean of 3.7 with a lower standard deviation of 0.62, demonstrating a strong positive assessment with slightly less variability compared to idealized influence. These findings suggest that while employees generally perceive transformational leadership favorably, targeted interventions could help reduce variability and enhance the uniformity of these perceptions.

Table 1
Descriptive Statistics

	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Idealized Influence	3.7	0.72	0.605	0.125	0.045	0.250
Inspirational Motivation	3.7	0.62	0.468	0.125	0.267	0.250
Intellectual Stimulation	3.6	0.58	0.114	0.125	0.457	0.250
Individualized Consideration	3.5	0.52	0.190	0.125	0.154	0.250
Empowerment	3.7	0.58	0.477	0.125	0.105	0.250
Entrepreneurial Performance	3.7	0.48	0.781	0.125	0.779	0.250

4.2 Principal Component Analysis

Principal component analysis removed the least contributory features, so validating measurement dimensionality and evaluating the suitability of factor analysis. The assessment of sampling adequacy was performed utilizing the Kaiser–Meyer–Olkin (KMO) index, deemed significant if exceeding 0.5. The Bartlett test of sphericity was conducted, with significance established at below 1%. Cronbach's alpha was utilized to assess the scales' dependability. This phase confirms the reliability and validity of the measures prior to hypothesis testing. The retained items together with their psychometric qualities are displayed in Table 2.

Table 2
Convergent Validity of Measures and Reliability Index

Items	Factor Loadings	Extraction AVE	KMO	Alpha Cronbach
Idealized Influence				
II4 Leaders demonstrate a strong personal commitment to the organization.	.829	.738	0.795	0.836
II5 Leaders act ethically and with integrity.	.814	.694		
II3 Leaders earn the respect and trust of others.	.759	.676		
II2 Leaders is a positive role model for me.	.744	.610		
Inspirational Motivation				
IM1 Leaders articulate a clear and attractive vision of the future.	.802	.671	0.738	0.754
IM4 Leaders communicate a sense of purpose and meaning.	.717	.642		
IM3 Leaders motivate and inspire through their speeches and actions.	.706	.656		
IM2 Leaders express high expectations and encourage their subordinates to achieve these expectations.	.646	.585		
Individualized Consideration				
IC1 Leaders treat each individual uniquely based on their needs.	.952	.907	0.700	0.902
IC4 Leaders recognize individual strengths and talents.	.950	.909		
Intellectual Stimulation				
IS4 Leaders encourage exploring new ways of doing things.	.783	.686	0.800	0.838
IS5 Leaders value continuous learning and improvement.	.710	.568		
IS1 Leaders inspire others to think creatively and innovatively.	.609	.506		
Empowerment				
E4 Leaders create an environment where employees feel responsible for their work.	.780	.614	0.774	0.776
E3 Leaders support employee initiative and ownership of projects.	.700	.511		
E5 Leaders encourage subordinates to develop their skills and grow.	.526	.309		
Transformational Leadership Indices (Five Constructs)				
KMO	= 0.836			
Bartlett's Test of Sphericity	Approx. Chi-Square		1883.259	
	Sig.		0.00	
Total Variance Explained	64.2%			
Entrepreneurial Performance				
EP6 The company attracts and retains top talent.	.819	.671	0.833	0.863
EP7 The company establishes strong strategic partnerships.	.810	.656		
EP8 The company is proactive in exploring new opportunities.	.690	.577		
Bartlett's Test of Sphericity	Approx. Chi-Square		179.036	
	Sig.		0.00	
Total Variance Explained	60.1%			

The results confirm that all scales are reliable. According to Ghewy and Belli [82], the acceptability threshold for Cronbach's alpha ranges from 0.6 to 0.8 in exploratory studies. This research demonstrates that all scales exhibit reliability above 0.7, confirming their internal consistency. Idealized Influence (II) retained four out of five items, with high factor loadings ranging from 0.744 to 0.829 and AVE values between 0.610 and 0.738. Cronbach's alpha is 0.836, indicating good reliability, while the KMO index of 0.795 suggests a satisfactory sample fit. Inspirational Motivation (IM) retained four out of five items, with factor loadings from 0.646 to 0.802 and AVE values between 0.585 and 0.671. Cronbach's alpha is 0.754, and the KMO index is 0.738, indicating an acceptable fit.

Individualized Consideration (IC) retained two out of five items, both with very high factor loadings (0.950 and 0.952) and AVE values of 0.907 and 0.909. Cronbach's alpha is 0.902, and the KMO index of 0.700 reflects excellent internal consistency. Intellectual Stimulation (IS) retained three out of five items, with factor loadings ranging from 0.609 to 0.783 and AVE values between 0.506 and 0.686. Cronbach's alpha is 0.838, and the KMO index of 0.800 confirms a good fit. Empowerment (E) retained three items, with factor loadings from 0.526 to 0.780 and AVE values between 0.309 and 0.614. Despite a lower factor loading for one item, Cronbach's alpha is 0.776, and the KMO index is 0.774, indicating a sufficient fit.

Entrepreneurial performance retained four out of five items, with factor loadings of 0.690–0.819 and AVEs of 0.577–0.671. Cronbach's alpha (0.863) and KMO (0.833) indicate strong internal consistency and suitability for factor analysis. Transformational leadership explains 64.2% of total variance, while entrepreneurial performance has a KMO of 0.833, a significant Bartlett test (Chi-Square = 179.036, $p < 0.01$), and 60.1% variance explained. High factor loadings, AVEs above 0.5, and Cronbach's alphas exceeding 0.7 confirm convergent validity and internal reliability. The measurement model meets the criteria for structural model assessment.

4.3 Discriminant Validity and Correlation Coefficient

The MSV values range from 0.10 to 0.27, with IC and EP showing the highest values at 0.27. The ASV values range from 0.33 to 0.61, with EP having the highest value at 0.61. Since MSV values are lower than ASV across all dimensions, discriminant validity is confirmed, ensuring that each dimension remains distinct. Additionally, both MSV and ASV values are lower than AVE (Table 2), further validating discriminant validity [83]. The correlations between TL dimensions and EP are statistically significant ($p < 0.01$). II is positively correlated with IM at 0.450, IS at 0.225, IC at 0.288, and E at 0.305. IC is positively correlated with E at 0.315 and EP at 0.528. Moreover, E shows a positive correlation with EP at 0.322. These significant correlations indicate a strong positive relationship between TL dimensions and EP. The higher correlation between certain dimensions, such as IC and EP, suggests that some aspects of TL have a stronger impact on EP. The implementation of these tests enables the verification of the research hypotheses.

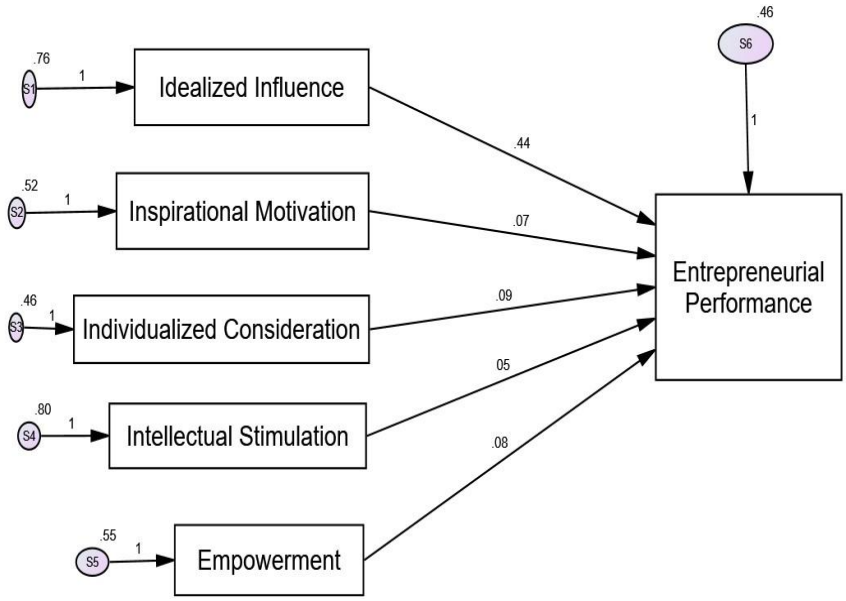

Fig.2. Verified Hypotheses with □ Values.

Table 3
Discriminant Validity and Correlation Coefficient

	MSV*	ASV*	II	IM	IS	IC	E
II Idealized Influence	0.21	0.41	1				
I.M. Inspirational Motivation	0.20	0.54	0.450**	1			
I.S. Intellectual Stimulation	0.15	0.33	0.225**	0.387**	1		
I.C. Individualized Consideration	0.27	0.58	0.288**	0.322**	0.251**	1	
E Empowerment	0.10	0.39	0.305**	0.250**	0.213**	0.315**	1
E.P. Entrepreneurial Performance	0.27	0.61	0.466**	0.248**	0.396**	0.528**	0.322**

*MSV= Maximum shared variance
*ASV= Average shared variance
**. Correlation is significant at the 0.01 level (2-tailed).

4.4 Hypotheses Testing

The five hypotheses outlined earlier have been validated through multiple linear regression analysis. The relevant indicators supporting these findings are presented in Table 4.

Table 4
Regression Weights

			Estimate	S.E.	C.R.	Beta	P	Hypotheses
Idealized Influence	→	Entrepreneurial Performance	0.445	0.040	11.106	0.486	0.00	Supported
Inspirational Motivation	→	Entrepreneurial Performance	0.070	0.049	7.448	0.163	0.00	Supported
Individualized Consideration	→	Entrepreneurial Performance	0.094	0.051	6.830	0.180	0.00	Supported
Intellectual Stimulation	→	Entrepreneurial Performance	0.054	0.039	5.373	0.160	0.00	Supported
Empowerment	→	Entrepreneurial Performance	0.084	0.047	4.784	0.148	0.00	Supported
T-Test	6.541		F-test	28.09		R^2	0.523	
GFI	0.908>0.9		AGFI	0.907>0.9		IFI	0.920>09	
Chi-Square	2.1<5		RMSEA	0.071<0.08		P-close	0.00<0.05	

The findings indicate that all TL dimensions exert a positive and significant influence on EP. Table (4) presents the regression weights utilized to test the hypotheses, demonstrating the strength and direction of these relationships.

Idealized influence (II): The results indicate that idealized influence has the strongest impact on EP, with a regression coefficient of Beta = 0.486. The low standard error (S.E. = 0.040) and high critical ratio (C.R. = 11.106) further validate the robustness of this relationship. These findings provide strong empirical support for the hypothesis. H1. Idealized influence significantly statistically influences entrepreneurial performance (p-value <0.05).

Inspirational Motivation (I.M.): The findings indicate that IM has a lower influence (Beta = 0.163) compared to II but remains statistically significant (C.R. = 7.448, P < 0.01). This underscores its crucial role in enhancing EP, reinforcing the importance of articulating a clear and compelling vision. These results support the hypothesis. H2. Inspirational motivation has a significant statistical influence on entrepreneurial performance (p-value <0.05).

Intellectual Stimulation (I.S.): The findings reveal that IS has the lowest direct influence among the TL dimensions, with a regression coefficient of Beta = 0.160. Despite this, the relationship remains statistically significant (C.R. = 3.573, P < 0.01), indicating that fostering creativity and innovation positively contributes to EP. These results support the hypothesis. H3. Intellectual stimulation has a significant statistical influence on entrepreneurial performance (p-value <0.05).

Individualized Consideration (I.C.): The results indicate that IC has a moderate positive impact on EP, with a regression coefficient of Beta = 0.201. The critical ratio (C.R. = 6.830) confirms the statistical

significance of this relationship. These findings suggest that providing individualized attention to employees enhances entrepreneurial performance, supporting the hypothesis. H4. Individualized consideration has a significant statistical influence on entrepreneurial performance (p-value <0.05).

Empowerment (E): The results demonstrate that empowerment positively influences EP, with a regression coefficient of Beta = 0.148. The critical ratio (C.R. = 4.784) confirms the statistical significance of this relationship. These findings highlight the importance of empowering employees to enhance entrepreneurial performance, providing empirical support for the hypothesis. H5. Empowerment has a significant statistical influence on entrepreneurial performance (p-value <0.05).

The regression coefficients (Beta) indicate that II has the most substantial impact on EP (Beta = 0.486), followed by IC (Beta = 0.201), IM (Beta = 0.163), IS (Beta = 0.160), and E (Beta = 0.148). The P-values for all dimensions are below 0.01, confirming that all hypothesized relationships are statistically significant. The goodness of fit indices (GFI, AGFI, IFI, CHI-SQUARE, RMSEA) demonstrate that the regression model aligns well with the data, ensuring its validity. The R^2 value of 0.523 indicates that TL dimensions explain 52.3% of the variance in EP. The model exhibits strong fit, with a GFI of 0.908 and an AGFI of 0.907, both surpassing the 0.9 threshold, signifying a well-adjusted model. Additionally, the IFI of 0.920 exceeds 0.9, confirming a strong incremental fit. A chi-square value of 2.1, which is below 5, further supports the model's robustness. Moreover, an RMSEA of 0.071, under the 0.08 threshold, indicates an acceptable approximation of error. Finally, a P-dose of 0.00, significantly below 0.05, validates the statistical significance of the results.

4.5 Results Interpretations and Implications

The study underscores the impact of TL dimensions, with II emerging as the most influential factor, followed by IC, IM, IS, and E. This ranking provides a structured perspective on how each TL component contributes to EP. The high validity and reliability indices (GFI, AGFI, IFI, RMSEA) confirm the robustness of the measurement instruments, reinforcing their reliability in assessing TL and EP. Methodologically, the study contributes to the literature by validating these tools within the examined context. The discriminant validity and correlation coefficients indicate significant relationships between TL and EP while maintaining conceptual distinctions among dimensions. This differentiation enhances the understanding of each dimension's specific role and its interplay within organizational settings.

The strong correlations between TL dimensions, particularly between IS and IM, indicate that these leadership aspects are interconnected rather than functioning in isolation. This finding enriches leadership theory by emphasizing the value of an integrative approach, where different TL dimensions reinforce one another to maximize their impact on performance. The fit indices—GFI (0.908), AGFI (0.907), and IFI (0.920)—demonstrate that the TL model aligns well with the observed data, confirming its relevance and effectiveness in the organizational context examined. The chi-square value of 2.1, remaining below the threshold of 5, further validates the model's statistical adequacy, reinforcing confidence in the identified relationships between TL and EP. With an RMSEA of 0.071, the results indicate an acceptable error approximation, enhancing the reliability of the study's conclusions. These findings underscore the importance of TL dimensions and justify investment in leadership development initiatives to enhance EP within organizations.

The PCA findings confirm that the five dimensions of TL and EP are well-defined and reliably measured. Managers can leverage these dimensions to evaluate and enhance leadership practices, fostering a more efficient work environment. Emphasizing IC and E can strengthen the consistency and effectiveness of leadership approaches. The results underscore the significance of II and IC in improving EP, suggesting that managerial efforts should priorities these dimensions for optimal outcomes. While IM and E have a slightly lower impact, they remain integral to effective TL.

Additionally, developing skills related to IS can contribute positively to EP, albeit to a lesser extent. The goodness of fit indices validates the proposed model's effectiveness, providing a solid foundation for strategic interventions. The findings further confirm the strong correlation between II and EP, aligning with previous research [50; 51; 84]. These results reinforce the positive influence of TL [37; 38] and support prior conclusions that CI, as a key TL component, is essential for employee motivation and performance enhancement [7; 47].

The findings underscore the significance of TL, particularly through II and IM [52; 53; 55]. Leaders who effectively communicate a clear vision (IM) can enhance performance outcomes [59; 61]. The results also align with research on IC, reinforcing previous work that emphasizes the value of treating each team member uniquely [6; 12]. Additionally, E is confirmed as a critical factor for EP, consistent with prior studies highlighting the role of team empowerment in organizational success [63; 64; 67]. These findings conform to established model fit criteria and align with similar research, strengthening their validity. While the results largely corroborate existing studies, they also suggest the necessity for further research to explore contextual causal relationships. Notably, the study identifies a positive but weaker relationship than some previous research had reported [79; 85; 86].

5. Conclusion and Recommendations

This study confirms the significance of transformational leadership in enhancing organizational performance. Idealized influence is the most impactful dimension, fostering trust, ethics, and integrity, requiring managers to act as role models. Inspirational motivation, while moderate, remains vital for a dynamic work environment. Individualized consideration enhances engagement by recognizing employees' unique talents, improving satisfaction and performance. Intellectual stimulation drives innovation, necessitating training programmers to foster creativity. Practically, regional development project companies should invest in leadership training, continuous evaluation systems, and environments that encourage initiative and creativity. Recognition and reward mechanisms can further enhance performance and sustainable community development.

Despite its valuable insights, this study has limitations that warrant further research. The specific sample may limit generalizability, and the cross-sectional design prevents causal inferences. Self-reported data may introduce response bias, and the study did not account for contextual and organizational variables like culture, company size, and economic conditions. Additionally, leader and employee perceptions may vary across industries and cultural contexts, highlighting the need for broader investigation. Future research should employ a longitudinal approach to gain deeper insights into the causal relationships between TL practices and EP. Comparing results across different industries would help identify variations in the effectiveness of TL. Additionally, examining contextual variables such as organizational culture, firm size, and economic conditions could clarify their influence on the TL–EP relationship. Comparative studies across countries and cultures would enhance the generalizability of findings and reveal the impact of cultural differences on TL practices. Integrating mixed methods, combining qualitative and quantitative analyses, could offer a more comprehensive understanding of leadership practices and their effects. These recommendations, along with identified limitations, provide a roadmap for refining TL practices and expanding knowledge of their impact on EP. Future studies should further investigate the mechanisms through which these leadership styles shape performance across various sectoral contexts.

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