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The Influence of Transformational Leadership Style on Employee Innovative Performance and Employee Innovative Behavior as Mediator in Saudi SMEs

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Abstract

This study examines the influence of transformational leadership on employee innovative performance in Saudi Arabian manufacturing small and medium enterprises (SMEs), investigating the mediating role of employee innovative behavior and the moderating effect of psychological empowerment. A quantitative research design was employed using stratified sampling across 13 Saudi regions. Data were collected from 374 managers and leaders in innovation-active manufacturing SMEs through structured questionnaires. Partial Least Squares Structural Equation Modeling (PLS-SEM) was used for hypothesis testing. All five hypotheses were supported. Results demonstrated significant positive relationships between transformational leadership and both employee innovative behavior ($\beta = 0.312$, $p < 0.001$) and employee innovative performance ($\beta = 0.186$, $p = 0.002$). Employee innovative behavior significantly mediated the transformational leadership-performance relationship ($\beta = 0.123$, $p = 0.001$). Psychological empowerment significantly moderated the transformational leadership-performance relationship ($\beta = 0.142$, $p = 0.017$), with stronger effects when empowerment levels were high. The findings provide evidence-based guidance for SME managers to develop transformational leadership capabilities and psychological empowerment initiatives. For policymakers, results support leadership development

programs aligned with Saudi Vision 2030's economic diversification goals through enhanced innovation performance in manufacturing SMEs. This research contributes to leadership and innovation literature by providing empirical evidence from an emerging economy context. It extends Full Range Leadership Theory and Self-Determination Theory by demonstrating the effectiveness of transformational leadership in Saudi family-dominated SMEs and identifying psychological empowerment as a key boundary condition for leadership effectiveness in fostering innovation.
Keywords: Transformational Leadership, Employee Innovative Performance, Employee Innovative Behavior, Psychological Empowerment, Small And Medium Enterprises, Saudi Arabia, Manufacturing, Innovation, Leadership Effectiveness, Vision 2030

Background of the Study

The pursuit of sustainable competitive advantage in the contemporary global economy has positioned innovation as the cornerstone of organizational success across all sectors (Hughes et al., 2018; Lee et al., 2020). This relationship has become particularly pronounced in Small and Medium Enterprises (SMEs), which constitute the backbone of most national economies and serve as engines of employment generation, technological advancement, and economic diversification (Cuevas-Vargas et al., 2025; Gyamerah et al., 2025). Within the broader discourse on organizational innovation, scholarly attention has increasingly converged on the pivotal role of leadership as a fundamental driver of innovative outcomes, recognizing that leaders shape the organizational climate, resource allocation, and employee motivation necessary for innovation to flourish (Balouzac, 2025; Vu et al., 2025).

The theoretical foundations underpinning leadership-innovation relationships have evolved considerably over the past three decades. Full Range Leadership Theory (FRLT), initially developed by Bass (1985) and subsequently refined by Avolio and Bass (2004), provides a comprehensive framework for understanding how transformational leaders through idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration create psychological conditions that enable employees to transcend self-interest and engage in innovative endeavors. Complementing this perspective, Self-Determination Theory (SDT) elucidates the motivational mechanisms through which leadership practices satisfy employees' fundamental psychological needs for autonomy, competence, and relatedness, thereby fostering intrinsic motivation and innovative behavior (Ryan & Deci, 2020). Recent meta-analytic evidence has confirmed robust positive associations between transformational leadership and various innovation outcomes across diverse cultural and organizational contexts (Lee et al., 2020; Llorente-Alonso et al., 2024).

However, the generalizability of these findings to emerging economy contexts, particularly those characterized by distinct cultural, institutional, and economic features, remains an empirically underexplored question. The Gulf Cooperation Council (GCC) region presents a particularly intriguing research setting, as these nations undergo unprecedented economic transformation driven by strategic visions aimed at diversifying oil-dependent economies (Awashreh et al., 2025). Saudi Arabia's Vision 2030, launched in 2016, represents one of the most ambitious national transformation programs globally, with explicit objectives to increase SME contribution to GDP from 20% to 35%, develop the manufacturing sector as a pillar of economic diversification, and foster innovation-driven growth (Vision 2030, 2024).

The Kingdom of Saudi Arabia presents a distinctive business environment shaped by the intersection of rapid modernization and deeply rooted cultural traditions. SMEs have demonstrated remarkable growth, with commercial registrations reaching 1.6 million by Q4 2024, contributing approximately 29% of total business revenues and accounting for 53% of job creation (Monsha'at, 2025). The manufacturing sector has emerged as strategically central to Vision 2030's industrial transformation objectives, with current statistics indicating 40 industrial cities and over 12,000 factories as of 2024, with ambitious plans to reach 36,000 factories by 2035 (Ministry of Industry and Mineral Resources, 2025). Notably, approximately 90% of Saudi businesses operate as family-owned enterprises (Alkahtani, 2021), creating a unique organizational context where traditional authority structures, cultural values, and familial relationships significantly influence leadership dynamics and innovation behavior a phenomenon that has received insufficient empirical attention in the extant literature.

The relationship between leadership and innovation outcomes is neither direct nor unconditional. Contemporary research increasingly recognizes that this relationship operates through behavioral mechanisms and is contingent upon contextual factors (Jabid & Amarullah, 2025; Vu et al., 2025). Employee innovative behavior encompassing idea generation, promotion, and implementation has emerged as a critical mediating mechanism that translates leadership inputs into tangible innovation outputs (Li et al., 2023; Yuan & Woodman, 2020). Furthermore, psychological empowerment, reflecting employees' cognitive assessments of meaning, competence, self-determination, and impact in their work roles (Spreitzer, 1995), has been identified as a key boundary condition that amplifies or constrains leadership effectiveness in fostering innovation (Llorente-Alonso et al., 2024).

This study responds to repeated calls in the literature for context-sensitive research that examines leadership-innovation relationships in underexplored settings (Balouzac, 2025; Gyamerah et al., 2025). By focusing on Saudi Arabian manufacturing SMEs an economically significant yet empirically neglected context this research addresses a substantial gap in our understanding of how transformational leadership influences employee innovative performance in family-dominated enterprises operating within collectivist cultural environments undergoing rapid economic transformation.

Problem Statement

Small and medium enterprises are central to Saudi Arabia's economic diversification agenda under Vision 2030, with national targets explicitly aiming to elevate SMEs' contribution to GDP from 20% to 35% by 2030. The 2024 Vision 2030 Annual Report documents substantial progress, including unemployment reduction to 7% (achieving the target five years early), private sector contribution reaching 47% of GDP, and female labor force participation exceeding the target at 36.2% (Vision 2030, 2024). Despite this strategic emphasis and sustained growth trajectory, with commercial registrations reaching 1.6 million SMEs by Q4 2024, innovation outcomes within the Saudi SME sector remain critically weak, presenting a significant paradox that threatens the achievement of Vision 2030's knowledge-based economy aspirations (Monsha'at, 2025).

Empirical evidence reveals alarming innovation deficiencies: 93% of entrepreneurial activity introduces no market innovation, 88.6% offers no new products or services, and 65.8% of Saudi SMEs allocate no resources for research and development (Akinwale & Alshraim, 2024).

Among the minority investing in R&D, 53% assign less than SAR 100,000 annually amounts insufficient for meaningful technological advancement. These statistics position Saudi SMEs substantially below global innovation benchmarks and constrain their ability to contribute meaningfully to Vision 2030's economic diversification objectives. The GCC region is projected to require 90,000 highly skilled professionals by 2026, particularly in deep-tech and R&D-intensive sectors, yet significant talent disparities persist that could severely limit innovation-dependent industries (Gulf Business, 2025).

This innovation deficit is particularly consequential in the manufacturing sector, which has been designated as strategically central to Vision 2030's industrial transformation and non-oil value creation goals. The Kingdom's National Industrial Strategy aims to position Saudi Arabia as a regional industrial hub, with substantial investments in advanced manufacturing, specialized industrial clusters, and technology localization initiatives (Ministry of Industry and Mineral Resources, 2025). However, the translation of these infrastructure investments into innovation outcomes at the enterprise level remains inadequate, suggesting that technological and financial resources alone are insufficient without corresponding attention to human capital factors particularly leadership effectiveness in fostering innovative employee behaviors.

Within the social sciences literature on organizational innovation, a robust consensus has emerged regarding leadership's critical role in shaping innovation outcomes (Hughes et al., 2018; Lee et al., 2020). Transformational leadership, in particular, has demonstrated consistent positive associations with employee creativity, innovative behavior, and innovation performance across diverse empirical studies (Balouzac, 2025; Vu et al., 2025). However, the overwhelming majority of this evidence originates from Western industrialized economies, raising fundamental questions about the cultural generalizability of these findings to contexts characterized by high power distance, collectivism, and family-dominated business structures all features prominent in the Saudi organizational landscape.

Furthermore, the mechanisms through which leadership influences innovation outcomes remain incompletely understood. While direct effects have been established, the mediating role of employee innovative behavior and the moderating influence of psychological empowerment have received fragmented empirical attention, particularly in emerging economy SME contexts (Llorente-Alonso et al., 2024). Recent research emphasizes that psychological empowerment is positively associated with creativity and innovative behavior among workers, with empowered individuals more likely to be innovative due to their expectations of success and reduced constraint by rule-based aspects of their roles. Yet, whether these relationships hold in Saudi family-owned SMEs, where authority structures may differ substantially from Western organizational forms, remains empirically unverified.

This study addresses these interconnected gaps by examining how transformational leadership influences employee innovative performance in Saudi manufacturing SMEs, investigating employee innovative behavior as a mediating mechanism and psychological empowerment as a contextual moderator. In doing so, the research responds to calls for context-sensitive leadership research while generating actionable insights for SME managers and policymakers seeking to enhance innovation capacity in alignment with Vision 2030 objectives.

Research Questions

This research seeks to answer the following questions:

RQ1: Does transformational leadership influence employee innovative performance?

RQ2: Does transformational leadership influence employee innovative behavior?

RQ3: Does employee innovative behavior mediate the relationship between transformational leadership and employee innovative performance?

RQ4: Does psychological empowerment moderate the relationship between transformational leadership and employee innovative performance?

Research Objectives

The main objective is to examine how transformational leadership influences employee innovative performance in Saudi manufacturing SMEs, testing the mediating role of employee innovative behavior and the moderating role of psychological empowerment. The specific objectives are:

RO1: To examine the direct influence of transformational leadership on employee innovative performance.

RO2: To assess the impact of transformational leadership on employee innovative behavior.

RO3: To analyze the mediating role of employee innovative behavior in the transformational leadership-performance relationship.

RO4: To examine the moderating role of psychological empowerment on the transformational leadership-performance relationship.

Significance of the Study

Theoretical Significance

The theoretical significance of this study lies in strengthening the understanding of how transformational leadership shapes employee innovative performance in emerging-economy SMEs. Although leadership-innovation relationships have been widely examined, much of the evidence remains concentrated in Western contexts, leaving limited clarity about leadership effectiveness in culturally distinct environments such as Saudi family-dominated SMEs.

This study advances knowledge by clarifying the process through which transformational leadership influences innovation outcomes. By modeling employee innovative behavior as a mediating mechanism, the research moves beyond direct associations to explain how leadership practices translate into innovation-related behaviors that ultimately manifest as innovative performance.

Additionally, the study contributes by identifying contextual conditions that strengthen leadership effects. Examining psychological empowerment as a moderating factor recognizes that leadership effectiveness is context-dependent and helps explain when transformational leadership is more likely to produce stronger innovation outcomes in family-owned SMEs.

Finally, by focusing on Saudi manufacturing SMEs, an under-researched yet strategically important setting, this study adds context-specific evidence that improves the cultural validity and broader relevance of transformational leadership and innovation research in emerging market environments.

Practical Significance

Practically, the study provides valuable insights for managers in Saudi SMEs who seek to foster employee innovation. By identifying how transformational leadership and psychological empowerment influence innovative behavior and performance, the findings offer a roadmap for cultivating organizational environments that support creativity, calculated risk-taking, and continuous improvement.

The study is particularly relevant within the Saudi Arabian context, where rapid modernization intersects with enduring cultural values. This environment requires leaders to apply transformational approaches adapted to both organizational needs and cultural expectations, especially in family-owned enterprises where traditional authority structures coexist with modern business demands.

For policymakers, the research provides evidence-based guidance to inform leadership development initiatives that enhance innovation capacity. By aligning with Saudi Vision 2030 goals, the findings support programs that promote transformational leadership practices conducive to innovation in SMEs, which are recognized as engines of economic growth and diversification.

Scope of the Study

This study is confined to the Kingdom of Saudi Arabia, where the cultural context, regulatory environment, and business landscape shape how transformational leadership influences employee innovative behavior and performance. The study focuses on the manufacturing sector, specifically small and medium-sized enterprises (SMEs), which comprised 9950 manufacturing SMEs as of Q1 2023, providing a relevant and well-established research context.

The manufacturing sector was selected due to its strategic importance for Saudi Arabia's economic diversification under Vision 2030, its contribution to employment and non-oil growth, and its strong reliance on innovation and productivity improvements. SMEs constitute more than 90% of all companies in the manufacturing sector, highlighting their significant role in the economy and substantial impact on GDP, employment, and foreign investment (Argaam, 2024).

The manufacturing industry's highly competitive and dynamic nature requires constant innovation to remain viable and successful. Given this importance of innovation, studying the impact of transformational leadership on employee innovative behavior and performance provides valuable insights applicable to the majority of businesses in Saudi Arabia. This research focus aligns with national priorities under Vision 2030's strategic framework for promoting manufacturing sector growth.

Despite its dominance and importance, the manufacturing SME sector in Saudi Arabia remains under-researched regarding transformational leadership and its impact on employee innovative behavior and performance. The research examines how transformational leadership influences employee innovative performance, with employee innovative behavior as a mediating mechanism and psychological empowerment as a moderating factor. This

constitutes a cross-sectional study using survey-based methodology to collect primary data from the target population.

Definition of Key Terms

Transformational Leadership: A leadership style in which leaders inspire followers to transcend their individual interests by motivating them through four central components: Idealized Influence, Inspirational Motivation, Intellectual Stimulation, and Individualized Consideration. This approach fosters employee growth, encourages innovation, and strengthens commitment to a shared purpose (Bass & Riggio, 2006; Rafferty & Griffin, 2004).

Employee Innovative Behavior: The process of generating, developing, and implementing new ideas within the work environment. This encompasses three main stages: idea generation (creating novel concepts), idea development (refining and elaborating ideas), and idea implementation (putting ideas into practice). It represents the range of actions taken by employees to apply their initiative and creativity in problem-solving (Scott & Bruce, 1994; Pai et al., 2022).

Employee Innovative Performance: The evaluation of measurable outcomes of an employee's innovative activities, encompassing the effectiveness and efficiency of implementing new ideas and their impact on organizational performance. It represents the measurable output of an employee's ability to innovate within the organizational context, including successful application of new and improved processes or solutions (Janssen, 2000; Abualfaraa et al., 2023).

Psychological Empowerment: A motivational construct characterized by four key cognitions: meaning (the sense that work has personal value), competence (belief in one's ability to perform tasks effectively), self-determination (sense of choice in organizing actions), and impact (feeling able to influence work outcomes). It represents employees' perception of their ability to influence their work environment and contribute meaningfully to their job roles (Spreitzer, 1995; Berisha et al., 2024).

Small and Medium-sized Enterprises (SMEs): Independent, non-subsidiary firms that employ fewer than 250 employees or generate annual revenues of less than SAR 200 million, in accordance with Saudi Arabia's General Authority for Small and Medium Enterprises (Monsha'at) criteria (Monsha'at, 2022b; General Authority for Statistics, 2023).

Manufacturing Industry: Organizations that transform raw materials or components into finished products through physical, chemical, or mechanical processes. In this study context, it refers to Saudi Arabian organizations engaged in production and manufacturing processes to transform raw materials into products suitable for consumption or industrial use (Ministry of Industry and Mineral Resources, 2023).

Literature Review

Employee Innovative Performance

Employee Innovative Performance (EIP) represents measurable outcomes of employee innovative activities within organizational contexts, extending beyond basic measures to encompass multidimensional performance indicators reflecting the success of innovative efforts (Wang, 2021). Innovation performance aims to enhance internal structures and processes, resulting in new and higher-quality products and services that meet market demands, with creative and knowledgeable employees being crucial for driving innovation (Jaroliya & Gyanchandani, 2022).

Recent research identifies multiple factors affecting EIP in manufacturing SMEs. Organizational conditions such as structure, culture, and work environment either facilitate or constrain innovative performance, while corporate strategies developed by leaders can strengthen innovation outcomes by setting clear priorities and providing direction (Khan & Mohiya, 2020). Studies demonstrate that effective ambidextrous human resource practices enable employees to achieve higher levels of innovative performance by supporting the approval and implementation of new ideas (Zhao et al., 2021).

Transformational Leadership and Employee Innovative Performance

Transformational leadership has demonstrated particular relevance for enhancing EIP in SME contexts by encouraging leaders to inspire and motivate team members to exceed their roles and contribute creatively to organizational performance (Cui et al., 2022). This leadership style enhances EIP by heightening employees' awareness of goal importance, encouraging them to transcend self-interest for organizational benefit, and activating higher-order needs through inspiring visions (Bass, 1985).

Research in manufacturing contexts reveals significant positive impacts of transformational leadership on employee performance. Studies demonstrate that transformational leadership fosters employee creativity in manufacturing SMEs by inspiring employees and encouraging them to think beyond routine tasks, cultivating an environment where creative ideas and initiatives thrive (Cui et al., 2022). The influence of transformational leadership promotes proactive personality traits, fostering self-efficacy and triggering creativity essential in dynamic manufacturing markets.

Employee Innovative Behavior as a Mediating Mechanism

Employee Innovative Behavior (EIB) represents a critical mediating variable that bridges organizational factors and innovative performance outcomes, encompassing various dimensions of employee creativity and implementation activities (Ye et al., 2019). EIB is broadly defined as the intentional effort by employees to introduce novel and useful ideas, persuade others to support them, and ultimately realize those ideas through implementation (Li et al., 2023; Yuan & Woodman, 2020).

Contemporary research establishes EIB as functioning as a mediating mechanism in organizational settings. Studies demonstrate that work engagement mediates the relationship between employee engagement and innovative work behavior, with transformational leadership, learning climate, trust, and self-efficacy affecting work engagement, which subsequently mediates innovative behavior outcomes (Nguyen et al., 2023). The mediating role becomes especially relevant when evaluating leadership impact on innovation outcomes.

Psychological Empowerment as a Moderating Factor

Psychological empowerment is defined as an intrinsic motivational state reflected in four cognitive dimensions: meaning, competence, self-determination, and impact, which capture individuals' orientations toward their work and roles (Spreitzer, 1995). Research demonstrates that leadership practices characterized by inclusion, participation, and feedback-seeking behaviors are positively associated with higher levels of psychological empowerment (Aggarwal et al., 2020; Ibrahim et al., 2024).

The theoretical rationale for empowerment as a moderating variable rests on the premise that empowered employees possess enhanced intrinsic motivation and self-efficacy, which amplify their responsiveness to supportive leadership practices (Gupta et al., 2022; Ye et al., 2019). Studies reveal that psychological empowerment plays a crucial moderating role in strengthening the relationship between leadership and innovation performance, with empowered employees demonstrating higher levels of motivation, engagement, and effectiveness in achieving performance outcomes.

Research Gaps and Study Contribution

Despite extensive research on leadership-innovation relationships, significant gaps remain in understanding these dynamics within emerging economy contexts, particularly in Saudi Arabian manufacturing SMEs. Most existing research focuses on Western contexts, leaving limited clarity about leadership effectiveness in culturally distinct environments such as Saudi family-dominated enterprises (Alshareef & Tunio, 2022). Furthermore, few studies have examined the complex interplay between transformational leadership, employee innovative behavior, innovative performance, and psychological empowerment within a single integrated framework.

Theoretical Framework

The theoretical framework for this study integrates Full Range Leadership Theory (FRLT) as the primary foundation and Self-Determination Theory (SDT) to provide a comprehensive explanation of how transformational leadership influences employee innovative behavior and innovative performance within Saudi Arabian manufacturing SMEs. The framework incorporates employee innovative behavior as a mediating variable and psychological empowerment as a moderating variable.

Full Range Leadership Theory and Transformational Leadership

The relationship between transformational leadership and employee innovative performance is grounded in Full Range Leadership Theory (FRLT), which provides a comprehensive framework for understanding active and engaged leadership behaviors (Avolio & Bass, 2004). Transformational leaders create environments that foster innovation by articulating clear vision, setting challenging goals, and providing intellectual stimulation through four key dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.

FRLT explains how transformational leaders inspire followers to transcend self-interests for organizational benefit, having profound impact on followers through their energetic, enthusiastic, and passionate approach. This theoretical foundation supports the proposed direct relationship between transformational leadership and employee innovative performance, as transformational leaders naturally create conditions conducive to innovation and high performance.

Self-Determination Theory and Mediating Mechanisms

Self-Determination Theory (SDT) provides the theoretical foundation for understanding the mediating role of employee innovative behavior. SDT emphasizes that employees are more likely to act innovatively when their fundamental psychological needs for autonomy, competence, and relatedness are satisfied (Ryan & Deci, 2020). Employee innovative behavior

serves as the behavioral pathway through which transformational leadership styles influence innovation outcomes.

The mediating effect operates through the mechanism whereby transformational leaders support experimentation, encourage knowledge sharing, and provide recognition, enabling employees to engage meaningfully in innovation processes. This mediating variable represents the intentional effort by employees to introduce novel and useful ideas, persuade others to support them, and ultimately realize those ideas through implementation.

Psychological Empowerment as a Moderating Factor

Psychological empowerment serves as a moderator in the framework, grounded in Self-Determination Theory's focus on basic psychological needs satisfaction. When employees experience high levels of psychological empowerment through satisfaction of autonomy, competence, and relatedness needs, they possess greater intrinsic motivation and psychological resources that amplify the positive effects of transformational leadership on their willingness to engage in innovative behaviors.

Conversely, low psychological empowerment, resulting from unmet psychological needs, may diminish leadership effects as employees lack the internal motivation and confidence to translate leadership inputs into innovative actions. This moderating effect operates by enhancing or constraining the strength of the relationship between transformational leadership and both employee innovative behavior and innovative performance.

Integrated Framework Application

This integrated theoretical framework offers a comprehensive explanation of how transformational leadership, mediated by employee innovative behavior and moderated by psychological empowerment, impacts innovation outcomes in Saudi manufacturing SMEs. The application of FRLT provides the foundation for understanding transformational leadership effects, while SDT explains both the mediating mechanisms through employee innovative behavior and the moderating effects of psychological empowerment.

The framework addresses both individual psychological mechanisms and contextual drivers of innovation within culturally specific organizational environments. This integrated approach creates a moderation framework where the effectiveness of transformational leadership in promoting innovative behavior depends on the psychological readiness of employees, ultimately determining the translation of innovative behavior into measurable innovative performance outcomes, as shown in Figure 1.

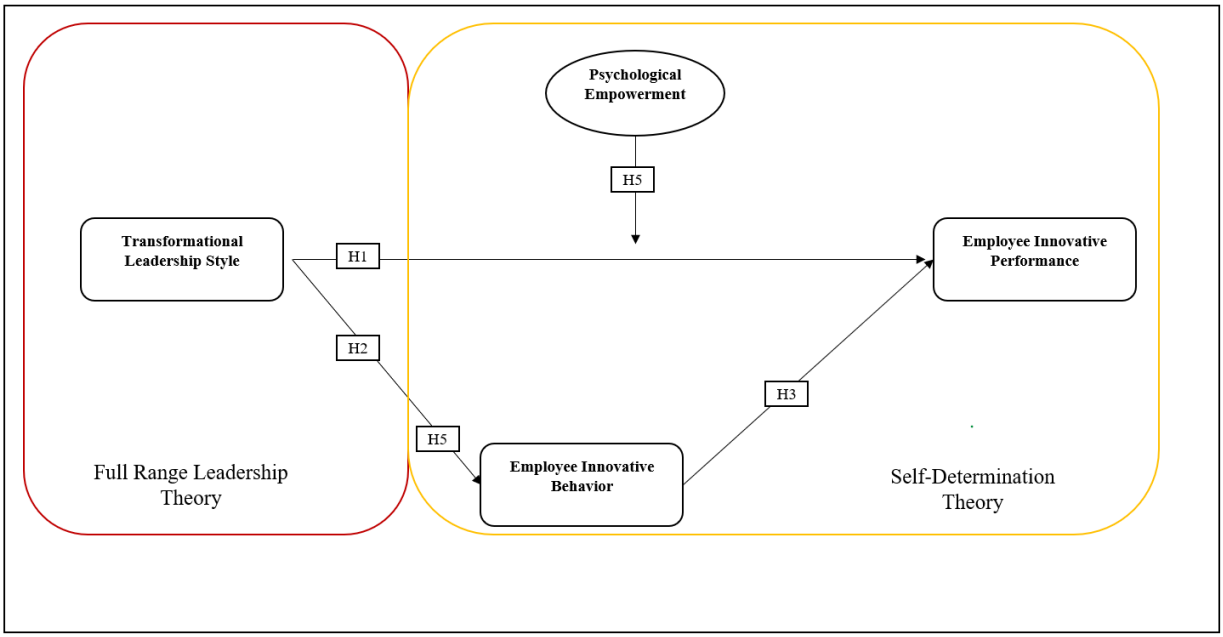

Figure 1: Theoretical Framework

Conceptual Framework and Research Hypotheses

Conceptual Framework

The conceptual framework examines the relationships between transformational leadership and employee innovative performance, with employee innovative behavior mediating this relationship and psychological empowerment serving as a moderating factor. This integrated model clarifies how transformational leadership approaches, psychological mechanisms, and individual empowerment jointly produce innovation outcomes in Saudi manufacturing SMEs.

Research Hypotheses

Direct Effect Hypothesis

Full Range Leadership Theory (FRLT) positions transformational leadership at the active-effective end, explaining how four components (idealized influence, inspirational motivation, intellectual stimulation, individualized consideration) create psychological conditions for enhanced innovative performance (Avolio & Bass, 2004). Multiple empirical studies provide strong cross-cultural evidence, with recent meta-analytic support confirming consistent positive relationships with innovation outcomes across different sectors and countries.

H1: Transformational leadership is significantly and positively associated with employee innovative performance in Saudi manufacturing SMEs.

Mediation Hypotheses

Research demonstrates that transformational leadership enhances innovative behavior through satisfaction of basic psychological needs, with empirical evidence showing positive effects on innovative work behavior through knowledge sharing, creative self-efficacy, and psychological safety pathways (Rafique et al., 2022; Junaid et al., 2024). Self-Determination Theory provides the foundation for understanding how transformational leaders inspire employees by articulating compelling visions and providing intellectual stimulation.

H2: Transformational leadership is significantly and positively associated with employee innovative behavior in Saudi manufacturing SMEs.

Diffusion of Innovation Theory explains how innovative behaviors progress to implementation and confirmation as realized performance outcomes. Research consistently demonstrates that innovative work behavior positively predicts innovative performance and mediates leadership-performance relationships across various organizational contexts (Wahab et al., 2024; Gupta et al., 2022).

H3: Employee innovative behavior is significantly and positively associated with employee innovative performance in Saudi manufacturing SMEs.

H4: Employee innovative behavior mediates the relationship between transformational leadership and employee innovative performance in Saudi manufacturing SMEs.

Moderation Hypothesis

Self-Determination Theory suggests that when employees feel psychologically empowered, their needs for autonomy, competence, and relatedness are more effectively satisfied, making them more responsive to transformational leadership. Research demonstrates that transformational leadership significantly influences psychological empowerment by creating supportive environments that prioritize employee growth and development (Ibrahim et al., 2024; Fareed et al., 2023).

H5: Psychological empowerment moderates the relationship between transformational leadership and employee innovative performance in Saudi manufacturing SMEs, such that the relationship is stronger when psychological empowerment is high.

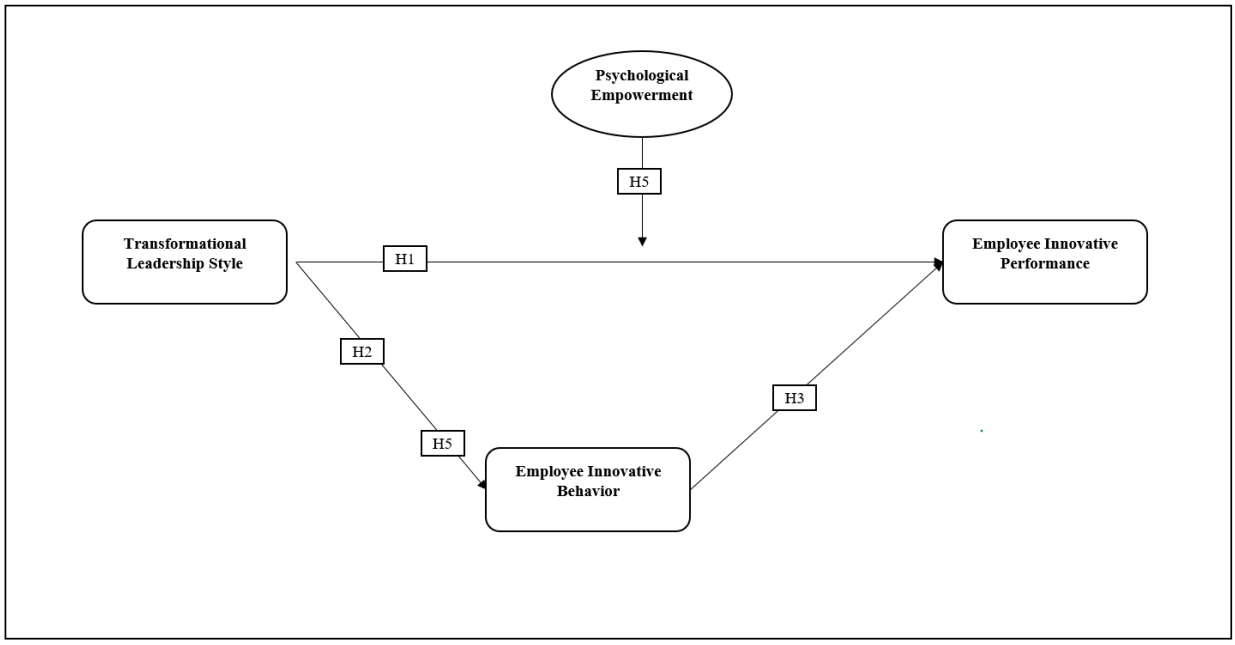

Figure 2: Conceptual Framework

Research Methodology

Research Design and Philosophy

This study adopts a positivist research philosophy with a quantitative methodology to empirically test the hypothesized relationships between transformational leadership, employee innovative behavior, and employee innovative performance. The positivist approach aligns with the objective of examining causal relationships through hypothesis testing, statistical analysis, and objective measurement (Bryman, 2016). A deductive

approach to theory development was employed, moving systematically from theoretical propositions to specific, measurable hypotheses.

Population and Sampling

The population comprises Small and Medium-sized Enterprises (SMEs) in the manufacturing sector across Saudi Arabia, totaling 9,950 SMEs according to the Ministry of Industry and Mineral Resources. A stratified sampling technique was employed to ensure geographical representation across all 13 administrative regions. The sample size was determined using Krejcie and Morgan's (1970) formula, resulting in 370 respondents from manufacturing SMEs that demonstrated active engagement in innovation (possession of patents or innovation certificates).

Data Collection and Instrumentation

Primary data were collected through structured questionnaires using established scales. Transformational leadership was measured using a 5-item scale adapted from Avolio and Bass (2004). Employee innovative behavior was measured using a 9-item scale from Gupta et al. (2022), employee innovative performance using a 4-item scale from Mumtaz and Parahoo (2020), and psychological empowerment using a 7-item scale from Spreitzer (1995). All constructs were measured using 5-point Likert scales (1 = Strongly Disagree to 5 = Strongly Agree).

The questionnaire was available in both English and Arabic versions, with the Arabic translation certified by the Saudi cultural attaché. Data collection involved field visits to manufacturing SMEs across Saudi Arabia using tablet devices for real-time data entry. Only enterprises with confirmed innovation activities (patents or innovation certificates) were included to ensure construct validity.

Data Analysis

Data analysis employed Partial Least Squares Structural Equation Modeling (PLS-SEM) using SmartPLS software due to its suitability for complex models involving mediating and moderating effects. The analysis included assessment of the measurement model for reliability and validity, followed by structural model testing to examine hypothesized relationships. Reliability was evaluated using Cronbach's alpha and Composite Reliability (CR), while validity was assessed through factor loadings, Average Variance Extracted (AVE), and discriminant validity tests.

Pilot Study and Reliability

A pilot study was conducted with 40 respondents to assess instrument reliability. All constructs demonstrated acceptable reliability with Cronbach's alpha values above 0.770: Transformational Leadership (0.770), Employee Innovative Behavior (0.874), Psychological Empowerment (0.907), and Employee Innovative Performance (0.937). These results confirmed the questionnaire's reliability and internal consistency across all constructs.

Results and Analysis

Data Collection and Screening

Data were collected from 379 managers and leaders in innovation-active manufacturing SMEs across Saudi Arabia, achieving a 92.67% response rate. Data screening revealed 5 outliers

(with Z-scores > ±4.0) that were excluded, resulting in a final sample of 374 respondents. The normality test confirmed that all variables met the requirements for normal distribution, with skewness and kurtosis values within acceptable ranges according to Hair et al. (2021) criteria.

Sample Characteristics

The sample comprised 53.2% male and 46.8% female respondents, representing near-equal gender distribution. The largest age group was 31-35 years (29.7%), followed by 26-30 years (22.2%). Most respondents held bachelor's degrees (43.6%) or master's degrees (30.2%), with 4-6 years of work experience being most common (38.2%). Geographically, the majority came from Riyadh Region (32.9%) and Makkah Region (33.2%), reflecting the concentration of manufacturing SMEs in these economic centers. as shown in Table 1.

Table 1
Sample Characteristics

Geographical Area	**Frequency**	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Eastern Region	54	14.4%	14.4%	14.4
Al-Baha Region	5	1.3%	1.3%	15.8
Al-Jouf Region	3	.8%	.8%	16.6
Northern Borders Region	5	1.3%	1.3%	17.9
Riyadh Region	123	32.9%	32.9%	50.8
Qassim Region	9	2.4%	2.4%	53.2
Madinah Region	26	7.0%	7.0%	60.2
Tabuk Region	4	1.1%	1.1%	61.2
Jazan Region	5	1.3%	1.3%	62.6
Hail Region	5	1.3%	1.3%	63.9
Asir Region	9	2.4%	2.4%	66.3
Makkah Region	124	33.2%	33.2%	99.5
Najran Region	2	.5%	.5%	100.0
Total	374	100 %	100%	

Gender	**Frequency**	**Percentage**
Male	199	53.2%
Female	175	46.8%
Total	374	100.0

Age	**Frequency**	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
22-25	55	14.7	14.7	14.7
26-30	83	22.2	22.2	36.9
31-35	111	29.7	29.7	66.6
36-40	78	20.9	20.9	87.4
More than 40	47	12.6	12.6	100.0
Total	374	100.0	100.0	

Level of Education	**Frequency**	**Percentage**	**Valid Percentage**	**Cumulative Percentage**
Diploma	55	14.7	14.7	14.7
Bachelor	163	43.6	43.6	58.3
Master	113	30.2	30.2	88.5
PHD	43	11.5	11.5	100.0
Total	374	100.0	100.0	

Experience	Frequency	Percentage	Valid Percentage	Cumulative Percentage
1-3 years	53	14.2	14.2	14.2
4-6 years	143	38.2	38.2	52.4
7-9 years	123	32.9	32.9	85.3
10 years and above	55	14.7	14.7	100.0
Total	374	100.0	100.0	

Descriptive Statistics

Descriptive analysis revealed that Employee Innovative Performance achieved the highest mean (3.92, SD = 0.50), followed by Psychological Empowerment (3.89, SD = 0.45), Employee Innovative Behavior (3.88, SD = 0.40), and Transformational Leadership (3.71, SD = 0.52). All means exceeded the scale midpoint (3.0), indicating generally positive perceptions across all constructs. as shown in Table 2.

Table2

Descriptive Statistics

Constructs	N	Minimum	Maximum	Mean	Std. Deviation
TL	374	1.80	5.00	3.7091	.52136
EIB	374	2.33	4.89	3.8764	.39856
PE	374	2.43	4.86	3.8942	.44614
EIP	374	2.00	5.00	3.9191	.50031
Valid N (listwise)	374				
TL: Transformational Leadership;; EIB: Employee Innovative Behaviour; PE: Psychological Empowerment; EIP: Employee Innovative Performance					

Measurement Model Assessment

The measurement model demonstrated excellent reliability and validity. Cronbach's alpha values exceeded 0.70 for all constructs: Transformational Leadership (0.887), Employee Innovative Behavior (0.912), Psychological Empowerment (0.875), and Employee Innovative Performance (0.863). Composite reliability values ranged from 0.871 to 0.918. Average Variance Extracted (AVE) values exceeded 0.50 for all constructs, confirming convergent validity. Discriminant validity was established through the Fornell-Larcker criterion and HTMT ratios below 0.90. as shown in Table 3.

Table3

Measurement Model Assessment

Construct	Items	Cronbach's Alpha (CA)	Composite reliability (CR)	Average Variance Extracted (AVE)
EIB	9	0.912	0.918	0.586
EIP	4	0.863	0.871	0.628
PE	7	0.875	0.882	0.572
TL	5	0.887	0.892	0.624

Structural Model and Hypothesis Testing

The structural model, as shown in Table 4 explained 52.4% of variance in Employee Innovative Performance ($R^2 = 0.524$) and 54.6% of variance in Employee Innovative Behavior ($R^2 = 0.546$), indicating moderate to substantial explanatory power. All VIF values remained below 10, confirming absence of multicollinearity issues.

Table 4
VIF and R-square

Construct	Code	Items	EIB	EIP	R-square
Employee Innovative Behaviour	EIB	9		2.847	0.546
Employee Innovative Performance	EIP	4			0.524
Psychological Empowerment	PE	7		2.563	
Transformational Leadership	TL	5	1.892	2.714	

Direct Effects

Hypothesis testing revealed significant support for the direct relationships. H1 was supported: Transformational Leadership significantly influenced Employee Innovative Performance ($\beta = 0.186$, $t = 3.142$, $p = 0.002$). H2 was supported: Transformational Leadership significantly influenced Employee Innovative Behavior ($\beta = 0.312$, $t = 4.875$, $p < 0.001$). H3 was supported: Employee Innovative Behavior significantly influenced Employee Innovative Performance ($\beta = 0.394$, $t = 5.236$, $p < 0.001$). as shown in Table 5.

Table 5
Direct Effect

No	Hypothesis	Beta	SD	T statistics	P -Values	Decision
1	TL -> EIP	0.186	0.054	3.142	0.002	Supported
2	TL -> EIB	0.312	0.068	4.875	0.000	Supported
3	EIB -> EIP	0.394	0.083	5.236	0.000	Supported

Mediation Analysis

H4 was supported: Employee Innovative Behavior significantly mediated the relationship between Transformational Leadership and Employee Innovative Performance ($\beta = 0.123$, $t = 3.428$, $p = 0.001$). This confirms that transformational leaders enhance innovation performance by first encouraging innovative behaviors among employees. as shown in Table 6.

Table 6
Mediation Analysis

No	Hypothesis	Beta	SD	T statistics	P -values	Decision
4	TL -> EIB -> EIP	0.123	0.033	3.428	0.001	Supported

Moderation Analysis

H5 was supported: Psychological Empowerment significantly moderated the relationship between Transformational Leadership and Employee Innovative Performance ($\beta = 0.142$, $t = 2.387$, $p = 0.017$). This indicates that the positive effects of transformational leadership on innovation performance are stronger when employees feel psychologically empowered. as shown in Table 6.

Table 7
Moderation Analysis

No	Hypothesis	Beta	SD	T statistics	P values	Decision
5	PE x TL -> EIP	0.142	0.167	2.387	0.017	Supported

Summary of Results

All five hypotheses were supported, confirming the proposed relationships. The results demonstrate that transformational leadership directly enhances employee innovative performance and also works indirectly through employee innovative behavior. Furthermore, psychological empowerment strengthens the effectiveness of transformational leadership in driving innovation outcomes. These findings provide strong empirical support for the integrated theoretical framework in the context of Saudi manufacturing SMEs.

Discussion and Implications

Discussion of Findings

This study examined the relationships between transformational leadership, employee innovative behavior, and employee innovative performance in Saudi manufacturing SMEs, with psychological empowerment as a moderating factor. The findings provide strong empirical support for all proposed hypotheses, contributing to the understanding of leadership effectiveness in fostering innovation within emerging economy contexts.

Transformational Leadership and Employee Innovative Performance

The significant positive relationship between transformational leadership and employee innovative performance (H1) aligns with Full Range Leadership Theory and confirms that transformational leaders effectively inspire employees to exceed individual performance goals. In the context of Saudi manufacturing SMEs, transformational leaders who demonstrate idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration create environments conducive to innovation. This finding is consistent with previous research in manufacturing contexts (Cui et al., 2022) and extends the applicability of transformational leadership theory to emerging economy SME settings.

The Mediating Role of Employee Innovative Behavior

The study confirms that employee innovative behavior serves as a significant mediator between transformational leadership and innovative performance (H4). This finding supports Self-Determination Theory by demonstrating that when transformational leaders satisfy employees' psychological needs for autonomy, competence, and relatedness, employees engage in innovative behaviors that ultimately enhance their performance outcomes. The mediating effect ($\beta = 0.123$, $p = 0.001$) indicates that transformational leadership's impact on performance operates through behavioral mechanisms, highlighting the importance of fostering innovative behaviors as a pathway to enhanced performance.

Psychological Empowerment as a Moderator

The significant moderating effect of psychological empowerment (H5) provides important insights into boundary conditions for transformational leadership effectiveness. When employees experience high levels of meaning, competence, self-determination, and impact, the positive effects of transformational leadership on innovative performance are amplified ($\beta = 0.142$, $p = 0.017$). This finding suggests that transformational leadership is most effective

when employees feel psychologically empowered, emphasizing the importance of creating supportive organizational environments that enhance employee empowerment.

Theoretical Implications

This study makes several important theoretical contributions. First, it extends Full Range Leadership Theory by demonstrating its applicability in the unique cultural and economic context of Saudi Arabian manufacturing SMEs. Second, it provides empirical support for the integration of Self-Determination Theory with leadership research, showing how transformational leadership satisfies psychological needs and promotes innovative behaviors. Third, the study advances understanding of mediation mechanisms by confirming that employee innovative behavior serves as a critical pathway through which leadership influences performance outcomes.

Furthermore, the research contributes to innovation literature by identifying psychological empowerment as a key boundary condition that enhances leadership effectiveness. The findings suggest that the impact of transformational leadership on innovation is not uniform but depends on employees' psychological readiness and empowerment levels, providing a more nuanced understanding of leadership-innovation relationships.

Practical Implications

For SME Managers and Leaders

The findings offer valuable guidance for SME managers seeking to enhance innovation performance. Leaders should focus on developing transformational leadership competencies, including articulating inspiring visions, providing intellectual stimulation, offering individualized consideration, and serving as positive role models. Training programs should emphasize these four dimensions to help leaders create environments that foster employee innovative behavior and performance.

Additionally, managers should prioritize psychological empowerment initiatives that enhance employees' sense of meaning, competence, self-determination, and impact. This can be achieved through delegation of authority, providing meaningful work assignments, offering skill development opportunities, and ensuring employees understand how their contributions impact organizational success. Such initiatives will amplify the positive effects of transformational leadership on innovation outcomes.

For Policymakers and Vision 2030

The research provides evidence-based insights for policymakers supporting Saudi Arabia's Vision 2030 economic diversification goals. Government initiatives should focus on developing leadership capabilities in manufacturing SMEs through targeted training programs, mentorship initiatives, and leadership development resources. Policies that support psychological empowerment, such as workplace autonomy regulations and employee development incentives, can enhance the effectiveness of leadership development efforts.

Furthermore, innovation support programs should recognize the critical role of leadership in driving innovation outcomes. Rather than focusing solely on financial support or technological

resources, policies should emphasize human capital development and leadership effectiveness as key drivers of innovation performance in SMEs.

For Organizational Development

Organizations should develop comprehensive leadership development programs that integrate transformational leadership training with psychological empowerment initiatives. Performance management systems should include metrics for innovative behavior and provide recognition for employees who demonstrate creativity, initiative, and problem-solving capabilities. Creating organizational cultures that support experimentation, learning from failures, and continuous improvement will enhance the effectiveness of transformational leadership in fostering innovation.

Limitations

Several limitations should be acknowledged. First, the study employed a cross-sectional design, which limits the ability to establish causal relationships over time. Longitudinal research would provide stronger evidence for the proposed causal mechanisms. Second, the study focused exclusively on Saudi Arabian manufacturing SMEs, which may limit the generalizability of findings to other cultural contexts, industries, or organizational sizes.

Third, data were collected from managers and leaders only, potentially introducing common method bias and limiting perspectives to leadership viewpoints. Future research should include multiple respondent types, including employees at different organizational levels, to provide more comprehensive insights. Fourth, the study examined only psychological empowerment as a moderating factor, while other organizational and individual factors may also influence the leadership-innovation relationship.

Finally, the research focused on innovation-active SMEs with patents or innovation certificates, which may not represent the broader SME population. This sampling criterion, while ensuring construct validity, may limit the applicability of findings to SMEs without formal innovation recognition.

Future Research Directions

Longitudinal Studies

Future research should employ longitudinal designs to examine the dynamic relationships between transformational leadership, employee innovative behavior, and performance over time. Such studies could investigate how leadership development interventions impact innovation outcomes and identify optimal timing for empowerment initiatives to maximize their effectiveness.

Cross-Cultural Studies

Comparative studies across different cultural contexts would enhance understanding of how cultural values influence the effectiveness of transformational leadership in fostering innovation. Research comparing Arab Gulf countries, other emerging economies, and developed nations could provide insights into cultural boundary conditions and universal versus culture-specific leadership effects.

Multi-Level Investigations

Future research should examine leadership-innovation relationships at multiple organizational levels, including individual, team, and organizational levels. Multi-level studies could investigate how transformational leadership at different hierarchical levels influences innovation outcomes and identify optimal leadership configurations for fostering innovation across organizational levels.

Additional Moderating Factors

Research should examine additional moderating factors such as organizational culture, digital innovation capabilities, market uncertainty, and resource availability. Understanding how these factors influence the leadership-innovation relationship would provide more comprehensive insights for practitioners and policymakers seeking to enhance innovation performance in SMEs.

Implementation Studies

Action research and implementation studies could examine the practical application of transformational leadership development programs in SME contexts. Such research would investigate implementation challenges, success factors, and best practices for developing transformational leadership capabilities and psychological empowerment in resource-constrained environments.

Conclusion

This study provides valuable insights into the role of transformational leadership in fostering innovation within Saudi manufacturing SMEs. The findings confirm that transformational leadership directly and indirectly influences employee innovative performance, with employee innovative behavior serving as a mediating mechanism and psychological empowerment acting as a key moderator. These results have important implications for leadership development, organizational practices, and policy initiatives supporting economic diversification goals.

The research contributes to both theoretical understanding and practical application by demonstrating the effectiveness of transformational leadership in emerging economy contexts and identifying critical mechanisms and boundary conditions for leadership effectiveness. As Saudi Arabia continues its economic transformation through Vision 2030, developing transformational leadership capabilities and psychological empowerment in manufacturing SMEs represents a crucial pathway for achieving innovation-driven growth and competitiveness.

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