Advances in Social Sciences Research Journal – Vol. 12, No. 07
Publication Date: July 7, 2025
DOI:10.14738/assrj.1207.19083.
Alharbi, S., Dato Mansor, Z., & Leong, Y. C. (2025). The Impact of Leadership Styles on Employee Innovative Performance: The Mediating Role of Innovative Behaviour in Saudi Manufacturing SMEs. *Advances in Social Sciences Research Journal*, 12(07). 53-69.

The Impact of Leadership Styles on Employee Innovative Performance: The Mediating Role of Innovative Behaviour in Saudi Manufacturing SMEs

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ABSTRACT

This study investigates the differential effects of leadership styles on employee innovative performance within Saudi Arabia's manufacturing SMEs, emphasizing the mediating role of employee innovative behaviour. Drawing on Path-Goal Theory, Cognitive Evaluation Theory, and Diffusion of Innovation Theory, the study examines the direct and indirect relationships between four leadership styles—transformational, autonomy-based, laissez-faire, and inclusive—and innovation outcomes. A quantitative methodology was adopted, utilizing structured survey responses from 374 leaders and managers across various regions. Data were analyzed using Structural Equation Modeling. Findings reveal that inclusive and transformational leadership significantly enhance innovative performance through their impact on employee innovative behaviour. In contrast, autonomy and laissez-faire styles show limited influence. The mediating role of innovative behaviour proves critical in translating leadership into performance outcomes. This study contributes theoretical insights into leadership and innovation and offers practical guidance for SMEs aiming to boost innovation in emerging markets.

Keywords: Leadership Styles, Employee Innovative Performance, Innovative, SMEs.

INTRODUCTION

Small and medium-sized enterprises (SMEs) constitute a foundational pillar in the economic transformation of Saudi Arabia, contributing approximately 25% to the national Gross Domestic Product (GDP) and forming a strategic focus within the Vision 2030 initiative. In particular, the manufacturing sector within the SME landscape has garnered policy and academic attention due to its capacity for technological advancement, job creation, and export diversification. However, despite targeted reforms and strategic investments, innovation performance in Saudi manufacturing SMEs remains suboptimal, reflecting a persistent gap between the potential for innovation and its realization at the organizational level. Innovation performance, in this context, refers to the effectiveness with which employees and firms generate, promote, and implement novel products, processes, or ideas that contribute to competitive advantage and operational excellence. Leadership is widely recognized as a central

driver of organizational innovation, especially in knowledge-intensive and rapidly evolving sectors such as manufacturing. Different leadership styles influence the motivational and cognitive processes of employees in distinct ways, shaping their capacity and willingness to engage in innovation-related activities. While extant global literature acknowledges the significance of leadership in enhancing innovation, empirical investigations specific to non-Western, emerging market contexts such as Saudi Arabia remain relatively underdeveloped. Moreover, much of the existing scholarship tends to focus on large firms or technology-intensive enterprises, often overlooking the idiosyncratic leadership dynamics within SMEs. This neglect creates a critical research gap, particularly concerning how various leadership styles influence employee innovation within the distinctive socio-economic and organizational milieu of Saudi manufacturing SMEs.

Within this research, four leadership styles are examined to determine their influence on innovation outcomes: transformational, autonomy-based, laissez-faire, and inclusive leadership. Transformational leadership is characterized by intellectual stimulation, inspirational motivation, and individualized consideration, often cited as an effective mechanism for encouraging creativity and proactive behaviour among employees. Autonomy-based leadership promotes decentralization, delegation, and self-direction, which are believed to enhance employees' intrinsic motivation and ownership over tasks. Laissez-faire leadership, by contrast, involves a non-interventionist approach that may foster creativity through freedom but may also lead to ambiguity and lack of direction. Inclusive leadership, with its focus on psychological safety, openness, and participative decision-making, has recently emerged as a critical leadership construct associated with enhanced employee engagement and innovation. Each of these styles is theorized to exert varying degrees of influence on employee behaviour and innovation performance, depending on organizational structure, cultural norms, and task complexity. Central to this investigation is the mediating role of employee innovative behaviour, defined as the discretionary efforts of individuals to generate, champion, and realize new ideas within their organizational context. Previous studies have suggested that leadership impacts innovation primarily through the activation of such behaviours rather than through direct mechanisms alone. As such, employee innovative behaviour serves as the critical conduit through which leadership styles may translate into performance outcomes. By focusing on this behavioural pathway, the present study seeks to capture the micro-foundations of innovation performance, thereby providing a more nuanced and empirically grounded understanding of leadership's role in fostering innovation.

The research adopts an integrative theoretical perspective, drawing upon Path-Goal Theory, which posits that leaders enhance employee outcomes by clarifying goals and removing obstacles; Cognitive Evaluation Theory, which emphasizes the importance of intrinsic motivation in driving discretionary behaviour such as innovation; and Diffusion of Innovation Theory, which provides insights into how innovative practices are adopted and institutionalized within organizations. These theoretical lenses are collectively employed to support the conceptual framework and hypotheses, which seek to explain the complex and multi-layered relationships among leadership styles, employee innovative behaviour, and innovative performance in Saudi manufacturing SMEs. This study thus addresses a critical gap in the literature by offering a context-specific, behaviourally grounded, and empirically validated model of leadership-driven innovation. It contributes to ongoing academic debates

while also offering actionable insights for practitioners and policymakers concerned with SME development, leadership training, and innovation strategy in emerging market settings.

LITERATURE REVIEW

The theoretical and empirical foundations of leadership's impact on innovation performance are well-documented in organizational behaviour and innovation management literature. However, the mechanisms through which leadership influences innovation particularly within the SME sector in emerging economies remain subject to ongoing inquiry. This section critically reviews the relevant literature on leadership styles, employee innovative behaviour, and innovation performance, structured around the four leadership styles under investigation: transformational, autonomy-based, laissez-faire, and inclusive leadership. It also elaborates on the theoretical rationale for the mediating role of employee innovative behaviour. Transformational leadership has been extensively associated with enhanced innovation outcomes due to its emphasis on intellectual stimulation, vision articulation, and individualized support. Transformational leaders are known to foster an environment that encourages risk-taking, exploration of novel ideas, and continuous improvement, thereby enhancing both creative inputs and innovative outputs among employees. Empirical evidence consistently supports the positive relationship between transformational leadership and innovation performance across various organizational contexts (Akbari et al., 2021; Parveen & Alshehri, 2023). In the SME manufacturing context, where resources may be limited and agility is essential, transformational leadership is particularly relevant as it helps align employee motivation with innovation goals, facilitating greater commitment to change and experimentation. Autonomy-based leadership, sometimes described as empowering or participative leadership, involves delegating authority and decision-making to employees. This style is theoretically aligned with Cognitive Evaluation Theory, which posits that autonomy supports intrinsic motivation, thereby fostering innovation-related behaviours. Prior studies have linked autonomy-based leadership to elevated levels of creative self-efficacy and proactive problem-solving, particularly in decentralized and non-hierarchical organizational structures (Bilal et al., 2021; Rafiki, 2020). However, the effectiveness of this style is often contingent on employee readiness, task structure, and cultural factors. In high power-distance cultures such as Saudi Arabia, autonomy may not uniformly translate into innovation unless accompanied by clear role expectations and organizational support.

Laissez-faire leadership, by contrast, represents a passive and often ambiguous approach wherein leaders abdicate responsibility and avoid decision-making. While some scholars argue that the absence of direct supervision can create a space for independent thinking and creativity, the prevailing consensus identifies laissez-faire leadership as detrimental to innovation performance. It is frequently associated with confusion, lack of direction, and low accountability, which can stifle innovative efforts, especially in settings requiring coordination and resource mobilization (Alheet et al., 2021; Mihai, 2021). The inconsistent outcomes linked to laissez-faire leadership necessitate further empirical scrutiny, particularly in SME contexts where structural and strategic clarity is critical. Inclusive leadership has emerged in recent years as a distinct and impactful leadership style associated with employee engagement, diversity of thought, and innovation. Defined by accessibility, openness, and the promotion of psychological safety, inclusive leaders actively seek input from subordinates and foster environments where divergent ideas are welcomed and respected. This style is particularly conducive to innovation as it facilitates collaboration, knowledge sharing, and mutual respect,

all of which are foundational to the innovation process (Gupta et al., 2022; AlMulhim & Mohammed, 2023). Within SMEs, inclusive leadership may serve as a counterbalance to rigid hierarchies, enabling bottom-up innovation and enhancing organizational adaptability. Central to the conceptual model is the mediating role of employee innovative behaviour, which refers to the intentional and discretionary actions taken by employees to generate, advocate, and implement novel ideas, processes, or products. Numerous studies have identified employee innovative behaviour as the behavioural link between leadership and innovation outcomes (Abualoush et al., 2022; Alarifi & Adam, 2023). The process of innovation typically begins with the individual initiative and cognitive engagement of employees, making their behaviour a crucial determinant of organizational innovation performance. Leadership styles influence this behaviour by shaping motivational climates, providing resources, and clarifying innovation-related expectations.

The theoretical underpinnings of this study rest on three interrelated frameworks. Path-Goal Theory (House, 1971) suggests that effective leaders tailor their behaviour to meet the needs of their subordinates and remove obstacles to goal achievement, thereby enhancing performance. This theory supports the notion that leadership styles can either facilitate or inhibit employee engagement in innovation-related activities. Cognitive Evaluation Theory (Deci & Ryan, 1985) underscores the importance of autonomy, competence, and meaningfulness in fostering intrinsic motivation, which is a known precursor to innovative behaviour. Finally, Diffusion of Innovation Theory (Rogers, 2003) provides insights into how innovative ideas are adopted and institutionalized within organizations, framing innovation not only as an individual act but as a systemic process involving multiple actors and organizational structures. In synthesizing the existing literature, this study identifies critical gaps in both conceptual understanding and empirical application. First, there remains limited knowledge of how leadership styles operate in emerging-market SMEs, particularly in culturally specific contexts such as Saudi Arabia. Second, the mediating mechanisms through which leadership Influences innovation outcomes have not been fully explored, especially in relation to behavioural constructs like employee innovative behaviour. Addressing these gaps, the current study offers a theoretically grounded and empirically tested model that explains how different leadership styles influence innovation performance through behavioural pathways.

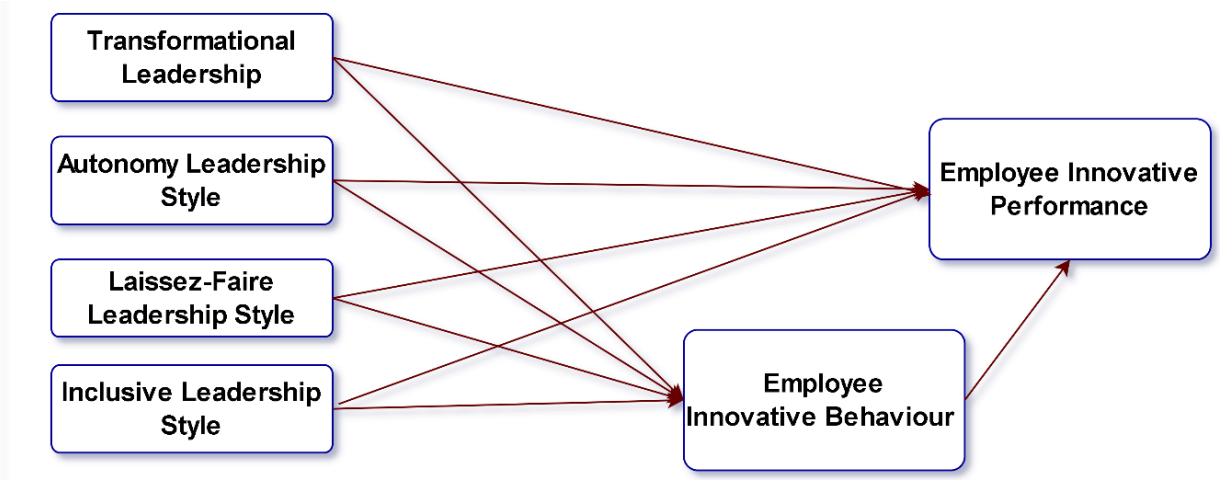

Figure 1: Conceptual Framework

METHODOLOGY

This study employs a quantitative research design to examine the effects of four leadership styles transformational, autonomy-based, laissez-faire, and inclusive on employee innovative performance, with employee innovative behaviour serving as a mediating variable. The research adopts a positivist epistemological stance, supporting the objective measurement of observable phenomena and the hypothesis-driven testing of causal relationships. The study aims to provide statistically valid and generalizable insights into the leadership–innovation nexus within the manufacturing sector of Saudi Arabian SMEs. The theoretical framework underlying the study is grounded in Path-Goal Theory, Cognitive Evaluation Theory, and Diffusion of Innovation Theory. These frameworks collectively inform the hypothesized relationships between leadership styles, employee behaviour, and innovation performance. Path-Goal Theory provides the basis for understanding how leadership behaviours align with employee needs and situational demands to enhance performance. Cognitive Evaluation Theory justifies the inclusion of autonomy and empowerment elements within leadership as key motivators of innovative behaviour. Diffusion of Innovation Theory contextualizes innovation as an organizational process influenced by both individual and systemic factors. The target population consists of leaders and managers working in manufacturing SMEs across various regions in Saudi Arabia. According to the most recent governmental data, there are 2,339 registered manufacturing SMEs operating within the Kingdom. The study employed a stratified random sampling method to ensure adequate representation across diverse geographic and organizational subgroups. The sampling strata were based on region and firm size to capture sectoral heterogeneity while enhancing external validity. To ensure adequate statistical power for Structural Equation Modeling (SEM), the minimum sample size was determined using Krejcie and Morgan's (1970) sampling table. A target sample size of 331 was established, and 374 valid responses were ultimately collected, exceeding the minimum requirement. Respondents were selected based on their involvement in innovation-related activities or decision-making processes within their firms. A screening criterion was applied to ensure that participating organizations were actively engaged in innovation, such as holding patents or possessing quality or innovation certifications. This approach was intended to enhance the relevance of the data to the research objectives, although it may have excluded informal innovators without formal recognition. Data were collected through a structured questionnaire administered in both English and Arabic.

The translation process followed Brislin's (1986) back-translation method to ensure linguistic and conceptual equivalence. The questionnaire comprised validated scales drawn from established instruments in the literature. Transformational leadership was measured using five items adapted from Northouse (2021) and Gupta et al. (2022), capturing elements such as intellectual stimulation and inspirational motivation. Autonomy leadership style was assessed using five items derived from Slåtten Jena (2019), focusing on the delegation of authority and promotion of self-direction. Laissez-faire leadership was measured through four items adapted from Little and Rubin (2019), emphasizing leader passivity and lack of intervention. Inclusive leadership was evaluated using nine items drawn from Gupta et al. (2022) and AlMulhim and Mohammed (2023), capturing leaders' accessibility, openness, and encouragement of participation. Employee innovative behaviour was measured through nine items based on Gupta et al. (2022) and Alarifi and Adam (2023), assessing the generation, promotion, and implementation of ideas. Employee innovative performance was measured using four items from Mumtaz and Parahoo (2020), focused on tangible innovation outcomes. All items were

URL: http://dx.doi.org/10.14738/assrj.1207.19083

measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). To ensure the reliability and validity of the instrument, a pilot study was conducted with 40 respondents. Internal consistency was confirmed through Cronbach's alpha values, which ranged from 0.77 to 0.94 across all constructs. Content validity was established through expert review, and construct validity was assessed using confirmatory factor analysis. Multicollinearity diagnostics and common method bias checks were also performed to ensure the robustness of the measurement process. Data were analyzed using Structural Equation Modeling via SmartPLS software. SEM was selected for its ability to simultaneously assess multiple relationships, including mediating effects, while accounting for measurement error. The analysis proceeded in two stages: assessment of the measurement model (including reliability, convergent validity, and discriminant validity) and evaluation of the structural model to test the hypothesized relationships. The significance of path coefficients was tested using bootstrapping procedures with 5,000 resamples, and model fit was assessed using standard indices. This methodological approach provides a comprehensive and statistically rigorous basis for evaluating the influence of leadership styles on innovation outcomes within Saudi manufacturing SMEs.

FINDINGS

Respondents Demographic Profiles

Table 1 provides a detailed distribution of the demographic characteristics of the study's respondents, offering critical context for interpreting the results concerning leadership styles and innovation outcomes. The geographical data reveal a sample concentration in the Riyadh and Makkah regions, accounting for 32.9% and 32% of respondents respectively, reflecting the economic prominence and industrial density of these areas within Saudi Arabia. The Eastern Region contributes 14%, while all other regions individually represent less than 7%, ensuring geographic representation albeit with regional concentration. Age distribution indicates that most leaders and managers are aged between 26 and 40, with the 31–35 age group forming the largest segment at 29.7%, followed by 26–30 at 22.2%, and 36–40 at 20.9%, indicating a relatively young and professionally active leadership cohort. Notably, a smaller but significant proportion of respondents 14.7% fall into the 22–25 age group, suggesting that some leaders and managers in Saudi SMEs are relatively young, possibly occupying early-stage supervisory or team-lead roles. Meanwhile, 12.6% of respondents are aged 40 and above, representing more experienced leadership segments. Educational qualifications show that a significant proportion of the sample holds at least a bachelor's degree 46%, with a further 30.2% possessing a master's degree, indicative of a well-educated respondent pool capable of engaging with innovation-related tasks. In terms of professional experience, the majority of participants report between four and nine years of work experience, with 38.2% having 4–6 years and 32.9% reporting 7–9 years, demonstrating a seasoned workforce likely to interact meaningfully with leadership dynamics and innovation processes. These characteristics collectively affirm the appropriateness and relevance of the sample for examining the hypothesized relationships outlined in the study, as shown in Table 1.

Table 1 : Frequency distribution of demographic characteristics

Geographical Area	Frequency	Percent	Valid Percent	Cumulative Percent	Age	Frequency	Percent	Valid Percent	Cumulative Percent
Eastern Region	54	14%	14%	14	22-25	55	14.7	14.7	14.7

Al-Baha Region	5	1.30%	1.30%	15.8	26-30	83	22.2	22.2	36.9
Al-Jouf Region	3	0.80%	0.80%	16.6	31-35	111	29.7	29.7	66.6
Northern Borders Region	5	1.30%	1.30%	17.9	36-40	78	20.9	20.9	87.4
Riyadh Region	123	32.90%	32.90%	50.8	More than 40	47	12.6	12.6	100
Qassim Region	9	2.40%	2.40%	52	Total	374	100	100	
Madinah Region	26	7.00%	7.00%	60.2	**Level of Education**	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Tabuk Region	4	1.10%	1.10%	61.2	Diploma	55	17	17	17
Jazan Region	5	1.30%	1.30%	62.6	Bachelor	163	46	46	58.3
Hail Region	5	1.30%	1.30%	69	Master	113	30.2	30.2	88.5
Asir Region	9	2.40%	2.40%	66.3	PHD	43	11.5	11.5	100
Makkah Region	124	32%	32%	99.5	Total	374	100	100	
Najran Region	2	0.50%	0.50%	100					
Total	374	100%	100%						
Experience	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**					
1-3 years	53	12	12	12					
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	17	17	100					
Total	374	100	100						

Descriptive Statistics

Table 2 provides a comprehensive overview of the descriptive statistics for the principal constructs examined in the study, offering critical insights into the perceptions and experiences of employees within Saudi manufacturing SMEs concerning leadership styles, innovative behaviour, and innovation performance.

Table 2 : Descriptive Statistics for the Key Constructs

Constructs	N	Minimum	Maximum	Mean	Std. Deviation
TL	374	1.80	5.00	3.709	.521
ALS	374	2.20	5.00	3.702	.418
LFL	374	1.00	5.00	3.256	.950
ILS	374	2.67	5.00	3.854	.434
EIB	374	2.33	4.89	3.876	.398
EIP	374	2.00	5.00	3.919	.500
Valid N (listwise)	374				

TL: Transformational Leadership; ALS: Autonomy leadership style; LFL: Laissez-faire Leadership style; ILS: Inclusive leadership style; EIB: Employee Innovative Behaviour; EIP: Employee Innovative Performance

The consistent sample size of 374 across all constructs ensures statistical comparability and strengthens the reliability of the descriptive analysis. Inclusive Leadership exhibits the highest mean value (M = 4.54), indicating a strong perception among employees that their leaders foster participatory environments and encourage diverse contributions. Transformational Leadership (M = 4.09) and Autonomy Leadership Style (M = 4.03) also show relatively high means, suggesting that leaders are generally viewed as motivational, supportive of independent thinking, and capable of stimulating intellectual engagement. In stark contrast,

Laissez-Faire Leadership records a significantly lower mean score (M = 2.56), reflecting a less favourable or infrequent presence of passive or disengaged leadership behaviours. Employee Innovative Behaviour demonstrates a high mean (M = 4.38), highlighting that employees actively engage in generating and implementing new ideas. Employee Innovative Performance, the outcome variable, also scores strongly (M = 4.19), suggesting that these innovation efforts translate into tangible organizational outcomes. The low standard deviations across constructs further suggest consistency in responses, underscoring the internal reliability of the measures. Collectively, Table 2 illustrates a leadership environment characterized by inclusiveness and proactivity, which aligns with high levels of innovative engagement and performance among employees.

Measurement Model

Convergent Validity:

Table 3 presents the outer loadings of the measurement model and provides critical evidence regarding the reliability and validity of the indicators used to measure the constructs under investigation. The results confirm that the constructs related to leadership styles, employee innovative behaviour, and employee innovative performance are represented by indicators with high standardized loadings, thereby supporting the internal consistency and convergent validity of the measurement model. Within the Autonomy Leadership Style construct, four of the five items display strong loadings above the 0.8 threshold, ranging from 0.882 to 0.921, while one item (ALS1) records a lower loading of 0.622, suggesting comparatively weaker contribution to the latent construct but still within acceptable bounds. Employee Innovative Behaviour items consistently perform well, with all nine indicators exhibiting loadings between 0.833 and 0.877, indicating a robust measurement of the behavioural mediator. Similarly, Employee Innovative Performance is captured effectively, with item loadings ranging from 0.803 to 0.909, reflecting strong construct representation. The Inclusive Leadership Style construct shows loadings between 0.715 and 0.874, confirming a coherent underlying factor structure. The indicators for Laissez-Faire Leadership range from 0.825 to 0.902, and Transformational Leadership indicators fall between 0.840 and 0.895, both demonstrating excellent reliability. Overall, Table 3 confirms that all relevant constructs are operationalized with adequate measurement precision.

Table 3 : Outer Loading of the Measurement Model

Construct	ALS	EIB	EIP	ILS	LFL	TL
ALS1	0.622					
ALS2	0.893					
ALS3	0.899					
ALS4	0.921					
ALS5	0.882					
EIB1		0.847				
EIB2		0.847				
EIB3		0.861				
EIB4		0.877				
EIB5		0.849				
EIB6		0.865				
EIB7		0.833				
EIB8		0.870				

EIB9		0.872				
EIP1			0.848			
EIP2			0.803			
EIP3			0.909			
EIP4			0.900			
ILS1				0.821		
ILS2				0.869		
ILS3				0.874		
ILS4				0.850		
ILS5				0.852		
ILS6				0.857		
ILS7				0.832		
ILS8				0.835		
ILS9				0.715		
LFL1					0.854	
LFL2					0.902	
LFL3					0.825	
LFL4					0.827	
TL1						0.892
TL2						0.863
TL3						0.895
TL4						0.886
TL5						0.840

Table 4 provides an assessment of discriminant validity among the six core constructs of the study using the Fornell-Larcker criterion, confirming that each construct captures a unique conceptual dimension within the model. The square roots of the average variance extracted (AVE) are positioned along the diagonal, with all values exceeding the recommended threshold of 0.70, thereby indicating strong convergent validity. Notably, the constructs of Autonomy Leadership Style, Employee Innovative Behaviour, and Employee Innovative Performance display particularly high diagonal values of 0.851, 0.858, and 0.866 respectively, reflecting robust internal consistency. Moreover, all off-diagonal correlation values are lower than the corresponding diagonal entries, thereby supporting discriminant validity and confirming that the constructs are empirically distinct. For instance, while the correlation between Transformational Leadership and Autonomy Leadership Style is relatively high (0.884), it remains below the AVE square root for Transformational Leadership (0.876), thereby meeting the discriminant validity criterion. These findings, as illustrated in Table 4, affirm the validity of the measurement model in capturing the unique roles of leadership styles, innovative behaviour, and performance within Saudi manufacturing SMEs.

Table 4: Discriminant validity (Fornell-Larcker approach)

Construct	ALS	EIB	EIP	ILS	LFL	TL
ALS	0.851					
EIB	0.783	0.858				
EIP	0.612	0.633	0.866			
ILS	0.814	0.883	0.603	0.835		
LFL	0.876	0.789	0.616	0.837	0.853	
TL	0.884	0.812	0.591	0.821	0.819	0.876

Table 5 presents the results of the discriminant validity assessment using the Heterotrait-Monotrait (HTMT) ratio for the core constructs of the study, specifically the four leadership styles, employee innovative behaviour, and employee innovative performance. The HTMT values serve as indicators of the extent to which each construct is empirically distinct from the others. All HTMT values remain below the conservative threshold of 0.90, supporting the discriminant validity of the measurement model. The highest observed HTMT value is between autonomy leadership style and inclusive leadership style (0.880), followed closely by the relationship between transformational leadership and inclusive leadership (0.878). These elevated values suggest strong associations but do not exceed the threshold that would raise concerns about construct redundancy. Other values, such as those between laissez-faire leadership and employee innovative behaviour (0.853) and between transformational leadership and employee innovative behaviour (0.864), also indicate robust but acceptable correlations. Overall, the results in Table 5 confirm that the constructs included in the model are conceptually and statistically distinct, thereby validating the integrity of the measurement framework employed in this study.

Table 5: Discriminant validity (HTMT method)

Construct	ALS	EIB	EIP	ILS	LFL	TL
ALS						
EIB	0.842					
EIP	0.685	0.683				
ILS	0.880	0.629	0.653			
LFL	0.685	0.853	0.693	0.613		
TL	0.665	0.864	0.646	0.878	0.601	

Multicollinearity Analysis:

Table 6 presents the results of the multicollinearity assessment conducted to evaluate the extent of intercorrelation among the independent variables included in the structural model. The Variance Inflation Factor (VIF) values indicate the presence of multicollinearity concerns, particularly in relation to Autonomy Leadership Style, which exhibits the highest VIF scores, registering 6.754 for Employee Innovative Behaviour and 8.936 for Employee Innovative Performance. These values exceed the conventional threshold of 5, suggesting a substantial degree of shared variance with other predictor variables. Similarly, Inclusive Leadership Style, Laissez-Faire Leadership Style, and Transformational Leadership also display elevated VIF values, ranging from approximately 5.3 to 7.5 across the two dependent variables, indicating that these constructs may not be entirely distinct in their predictive contributions. Employee Innovative Behaviour, when used as an independent variable predicting innovative performance, also demonstrates a high VIF of 6.482, further supporting the need for cautious interpretation. The findings outlined in Table 6 highlight potential issues of multicollinearity within the model, which could compromise the accuracy of coefficient estimates and necessitate careful specification to ensure valid inference.

Table 6: Multicollinearity Assessment based on VIF

Construct	Code	Items	EIB	EIP
Autonomy Leadership Style	ALS	5	6.754	8.936
Employee Innovative Behavior	EIB	9	-	6.482
Inclusive Leadership Style	ILS	9	4.129	7.549

Laissez-faire Leadership Style	LFL	4	5.349	6.489
Transformational Leadership	TL	5	5.334	6.567

Test of Hypotheses:

The results presented in Table 7 provide a detailed evaluation of the structural relationships among the core variables in the proposed model, highlighting the distinct effects of different leadership styles on employee innovative performance, both directly and through the mediating role of employee innovative behaviour. Transformational leadership demonstrates a significant positive direct effect on employee innovative performance, with a moderate path coefficient, indicating its meaningful contribution to fostering innovation within Saudi manufacturing SMEs. Inclusive leadership also exhibits a significant and direct positive influence on innovative performance, further underscoring its relevance in promoting employee-driven innovation. In contrast, both autonomy leadership and laissez-faire leadership yield positive but statistically non-significant direct effects on innovative performance, suggesting their limited utility in stimulating innovation outcomes in this context. With regard to mediation, inclusive leadership reveals a strong and statistically significant indirect effect on performance through employee innovative behaviour, confirming the behavioural pathway as a critical mechanism. Transformational leadership also shows a significant indirect effect, albeit less pronounced. Conversely, neither autonomy nor laissez-faire leadership demonstrates significant indirect effects, indicating a lack of influence on the behavioural processes that underpin innovation. Employee innovative behaviour itself significantly predicts innovative performance, confirming its mediating function within the model. These findings, as reported in Table 7, collectively affirm the differentiated roles that leadership styles play in shaping innovation outcomes through behavioural engagement.

Table 7: Results path model assessment

Direct Effect (Path Coefficient) Analysis					
No	Hypothesis	Beta	SD	T statistics	P -Values
1	TL -> EIP	0.112	0.054	2.070	0.002
2	ALS -> EIP	0.182	0.132	1.374	0.170
3	LFL -> EIP	0.192	0.109	1.764	0.078
4	ILS -> EIP	0.124	0.041	3.017	0.000
5	TL -> EIB	0.244	0.068	3.576	0.000
6	ALS -> EIB	-0.001	0.082	0.011	0.991
7	LFL -> EIB	0.059	0.055	1.071	0.284
8	ILS -> EIB	0.634	0.060	10.633	0.000
9	EIB -> EIP	0.363	0.083	4.360	0.000
10	TL -> EIB -> EIP	0.089	0.033	2.654	0.008
11	ALS -> EIB -> EIP	0.000	0.030	0.011	0.991
12	LFL -> EIB -> EIP	0.021	0.021	1.043	0.297
13	ILS -> EIB -> EIP	0.230	0.055	4.207	0.000

Coefficient of Determination (R2):

Table 8 illustrates the coefficient of determination (R^2) values, offering a clear indication of the explanatory strength of the model's independent variables in accounting for variance in the key constructs. The R^2 value for employee innovative behaviour (EIB) is 0.804, with an adjusted R^2 of 0.802, suggesting that approximately 80.4% of the variance in EIB is explained by the four

leadership styles examined. Similarly, the R^2 for employee innovative performance (EIP) is 0.683, with an adjusted R^2 of 0.670, indicating that the model accounts for 68.3% of the variance in EIP. These results, presented in Table 8, demonstrate the model's strong explanatory and predictive power.

Table 8: Coefficient of Determination (R2)

Construct	Items	R-square	R-square adjusted
EIB	9	0.804	0.802
EIP	4	0.683	0.670

Effect Size f 2:

Table 9 presents the effect size (f^2) analysis, offering insights into the magnitude of influence each variable exerts within the model. The results reveal that Inclusive Leadership Style has the most substantial direct effect on employee innovative performance, with an effect size of 0.307, indicating a strong contribution to innovation outcomes. Transformational Leadership also demonstrates a meaningful influence, with an effect size of 0.211, reinforcing its relevance in shaping performance. In contrast, both Autonomy Leadership Style and Laissez-Faire Leadership Style exhibit negligible impacts on performance, with effect sizes of 0.009 and 0.012 respectively, suggesting limited efficacy in promoting innovation within the studied context. Regarding employee innovative behaviour, Inclusive Leadership again shows a dominant effect size of 0.497, highlighting its critical role in motivating innovation-related actions. Transformational Leadership displays a smaller yet notable effect (0.057), whereas Autonomy and Laissez-Faire styles show minimal influence. Employee innovative behaviour itself exerts a modest but meaningful effect (0.046) on performance, confirming its mediating role as indicated in Table 9.

Table 9: Effect Size (f2)

No	Hypothesis	f-square
1	TL -> EIP	0.211
2	ALS -> EIP	0.009
3	LFL -> EIP	0.012
4	ILS -> EIP	0.307
5	TL -> EIB	0.057
6	ALS -> EIB	0.000
7	LFL -> EIB	0.003
8	ILS -> EIB	0.497
9	EIB -> EIP	0.046

Predictive Relevance Q^2 of Structural Model

Table 10 illustrates the model's predictive relevance for the two key constructs, employee innovative behaviour and employee innovative performance. The high Q^2predict value of 0.797 for employee innovative behaviour indicates that the model possesses substantial predictive accuracy in estimating behavioural responses related to innovation. In contrast, the Q^2predict value of 0.395 for employee innovative performance reflects a moderate level of predictive relevance. Supporting these outcomes, the lower RMSE and MAE values for employee behaviour, compared to higher error margins for performance, confirm that the model more precisely forecasts behavioural outcomes than innovation performance.

Table 10: Predictive Relevance (Q2 Value)

	Q^2predict	RMSE	MAE
EIB	0.797	0.455	0.307
EIP	0.395	0.784	0.585

DISCUSSION

The results of this study reveal a complex and differentiated influence of leadership styles on employee innovative performance within Saudi Arabian manufacturing SMEs, as perceived and reported by leaders and managers themselves. The analysis identifies inclusive leadership as the most influential predictor of employee innovative behaviour and, subsequently, innovative performance. The strong and statistically significant path from inclusive leadership to employee innovative behaviour underscores the relevance of this leadership style in facilitating proactive engagement, idea generation, and innovation implementation among employees, according to the perspectives of the leaders and managers who participated in this study. Inclusive leadership emphasizes leader accessibility, openness to input, and participative decision-making all of which contribute to the creation of psychologically safe and socially cohesive work environments where employees feel encouraged to explore novel solutions without fear of negative repercussions. In the context of SMEs, where formal innovation processes may be underdeveloped and agility is often a competitive advantage, the facilitation of inclusive dialogue and support emerges as a powerful leadership mechanism. The indirect pathway from inclusive leadership to innovative performance, fully mediated by employee innovative behaviour, further reinforces the behavioural-centric nature of innovation outcomes, indicating that inclusive leaders influence performance primarily by activating the discretionary efforts of their subordinates. The model's strong predictive and explanatory capacity for employee innovative behaviour ($Q^2 = 0.797$; $R^2 = 0.804$) further substantiates the critical role of inclusive leadership in fostering innovation from the ground up.

Transformational leadership also demonstrates a statistically significant positive relationship with both employee innovative behaviour and innovative performance, albeit to a lesser extent than inclusive leadership. The direct path from transformational leadership to innovative behaviour reflects the capacity of this style to inspire and intellectually stimulate employees, thereby enhancing their engagement with complex and uncertain tasks such as innovation. Transformational leaders typically articulate a compelling vision, encourage risk-taking, and provide individualized support, all of which align with the demands of innovative roles. In the Saudi manufacturing SME context where employees may face structural and cultural barriers to expressing novel ideas transformational leadership appears to provide the motivational and emotional scaffolding needed to transcend these limitations. Importantly, the results reveal a partial mediation effect, whereby the relationship between transformational leadership and innovative performance is strengthened when mediated by employee innovative behaviour. This indicates that while transformational leadership can directly influence performance outcomes, its effectiveness is magnified when employees are behaviourally engaged in innovation. The moderate yet statistically significant effect size and predictive relevance for innovative performance ($R^2 = 0.683$; $Q^2 = 0.395$) affirm that employee engagement in innovation is a necessary condition for leadership-driven performance improvements. These findings validate the theoretical propositions of transformational leadership within the innovation literature and emphasize the importance of fostering both cognitive and

behavioural readiness among employees to sustain innovation efforts in resource-constrained SME environments.

In contrast, autonomy leadership and laissez-faire leadership exhibit weak or statistically non-significant effects on both employee innovative behaviour and performance. Autonomy leadership, while theoretically aligned with the principles of self-direction and intrinsic motivation, appears to have limited practical efficacy in the Saudi SME context. The path analysis indicates no significant influence of autonomy leadership on innovative behaviour or performance, and the associated VIF values suggest potential multicollinearity with other leadership styles, possibly reflecting overlapping conceptual elements. The findings imply that providing autonomy in the absence of structured guidance or supportive mechanisms may not yield the intended motivational benefits. In high power-distance cultures such as Saudi Arabia, autonomy may be misinterpreted as a lack of managerial involvement or accountability, thereby creating confusion or reluctance among employees to take initiative. This cultural dynamic may attenuate the motivational value of autonomy, rendering it insufficient as a standalone leadership approach for driving innovation. Similarly, laissez-faire leadership characterized by a hands-off and non-interventionist approach shows no significant relationship with either behavioural or performance-related innovation outcomes. While some theoretical frameworks propose that reduced managerial oversight can foster independent thought and creative freedom, the empirical results in this study do not support this view. In the operational context of manufacturing SMEs, where coordination, clarity, and resource alignment are critical, the absence of leadership engagement may lead to ambiguity, reduced morale, and fragmented innovation efforts. The negligible effect sizes and non-significant paths suggest that passive leadership styles are ill-suited to contexts that demand active participation and behavioural engagement for innovation to occur.

Central to the theoretical and empirical model developed in this study is the mediating role of employee innovative behaviour, which serves as the behavioural conduit linking leadership styles to innovation performance outcomes. The strong, statistically significant path from employee innovative behaviour to employee innovative performance, combined with the full mediation observed for inclusive leadership and the partial mediation found for transformational leadership, reinforces the argument that leadership influences innovation not simply through direct instruction or policy, but by shaping employee motivation, behaviour, and engagement. Employee innovative behaviour encompasses a range of discretionary actions, including the generation, advocacy, and realization of novel ideas, and represents the proximate mechanism through which leadership styles affect organizational innovation. The model's explanatory strength is reflected in the high R^2 value for employee innovative behaviour, indicating that over 80% of its variance is accounted for by leadership styles. Furthermore, the high predictive relevance (Q^2 = 0.797) for this construct suggests that leadership-based interventions are likely to yield consistent behavioural outcomes. However, the more moderate predictive relevance for employee innovative performance (Q^2 = 0.395) indicates that additional factors such as organizational resources, external market conditions, or internal capabilities may also play a significant role in shaping innovation outcomes. These insights point to the need for a holistic leadership approach that combines motivational support with structural enablers to optimize innovation performance. Collectively, the findings of this study provide a behaviourally grounded and contextually specific understanding of how

leadership can be leveraged to drive innovation in emerging-market SMEs, with particular emphasis on the behavioural engagement of employees as the primary mechanism of influence.

CONCLUSION

This study offers a comprehensive and empirically grounded examination of the differential impact of leadership styles on employee innovative performance within the manufacturing SME sector of Saudi Arabia, with a particular focus on the mediating role of employee innovative behaviour. By integrating Path-Goal Theory, Cognitive Evaluation Theory, and Diffusion of Innovation Theory, the study establishes a theoretically robust and behaviourally nuanced model that captures the mechanisms through which leadership exerts influence on innovation outcomes. The findings confirm that inclusive and transformational leadership styles are the most effective in fostering employee innovative behaviour, which in turn significantly enhances innovative performance. Inclusive leadership, with its emphasis on psychological safety, participation, and openness, emerges as the most influential style, promoting a workplace culture conducive to creativity and idea implementation. Transformational leadership also demonstrates a meaningful, albeit comparatively weaker, effect by inspiring and intellectually stimulating employees to engage with innovation challenges. These results underscore the importance of leadership behaviours that actively engage and motivate employees, reaffirming that innovation in SMEs is largely driven by the behavioural dynamics cultivated within the organizational environment.

Conversely, autonomy leadership and laissez-faire leadership styles are found to have limited or statistically insignificant effects on both innovative behaviour and performance, suggesting that leadership approaches characterized by minimal intervention or excessive delegation may not resonate effectively in the cultural and operational realities of Saudi manufacturing SMEs. The mediating role of employee innovative behaviour emerges as central to understanding how leadership translates into innovation outcomes, with the strongest results observed when leadership actively encourages behavioural engagement rather than relying on indirect motivational cues. The study's high explanatory power (R^2 values of 0.804 and 0.683 for innovative behaviour and performance, respectively) and predictive relevance further validate the proposed model, while highlighting the need for leaders to intentionally cultivate environments that support innovation as a behavioural process. These findings offer valuable implications for leadership development programs, policy formulation, and strategic innovation initiatives aimed at enhancing the competitiveness of SMEs in emerging markets. By identifying the leadership styles that effectively activate employee-driven innovation, this study contributes to the evolving discourse on innovation management and provides a roadmap for cultivating high-impact leadership in dynamic, resource-constrained settings.

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