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Entrepreneurial Leadership Impacts on Innovation: The Role of Customer Focus

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Abstract. Innovation is a strategic outcome influenced by many aspects, e.g., leadership, strategy, organizational culture, quality management practices, and the convergence of different capabilities. However, leadership plays a crucial role in providing orchestration and strategic direction to prior efforts, thereby driving innovation success. Nevertheless, evidence on entrepreneurial leadership EL within that field remains limited and fragmented. EL is characterized by dimensions such as (visionary thinking, risk-taking, proactiveness, opportunity recognition, and adaptability), which can theoretically play a paramount role in fostering organizational innovation. Hence, this study aims to address this gap and examine the relationship between EL and innovation. The study also examines the mediating role of organizational customer focus, which can create conditions to satisfy the customers' needs through innovation. To answer the study questions, this study employs a quantitative research methodology utilizing a cross-sectional survey design. The target population is employees of the private sector in Saudi Arabia, using non-probability sampling. The study sample consists of N=129 respondents. To assess EL, the study adopts (Renko et al., 2015), to measure customer focus study adopts (Ahire et al., 1996), and to measure innovation, the study adopts (Kafetzopoulos & Psomas, 2015). The findings suggest that customer focus indeed mediates the relation between EL and process and product innovation and serves as a significant mechanism through which EL influences innovation.
Keywords: Innovation, Entrepreneurial Leadership, Customer Focus.

1. Introduction

To survive and prosper in today's dynamic environment, organizations need to be continuously innovative, e.g. (Aminova & Marchi, 2021; Audretsch, 1995; Cefis & Marsili, 2006; R. Fontana & Nesta, 2009). Innovation is not just a technical endeavor; rather, it's a strategic outcome influenced by many aspects, e.g., leadership, operational strategy, organizational culture, and quality management practices (Crossan & Apaydin, 2010; Hadjimanolis, 2000; Martins & Terblanche, 2003; Prajogo & Sohal, 2003). And enabled by a convergence of different capabilities, e.g., technological, infrastructure, and R&D capabilities.

Leadership specifically is identified by a growing body of literature as a key enabler of innovation, as it provides orchestration and strategic direction, driving innovation success and efficiency (OKE et al., 2009a). Leaders can communicate vision, allocate resources, organize efforts, and create an

organizational culture that drives both exploration and improvement (Hitt et al., 2010). This has attracted the attention of scholars to examine the relation between different styles and multiple types of innovation in different contexts and settings. Literature, for example, found that transformational leadership is important to fostering innovation, due to the leader's ability to cultivate intrinsic motivation and establish enabling conditions (Matzler et al., 2008). Similarly, evidence on transactional leadership and overall organizational innovation has been reported (Prasad & Junni, 2016).

However, empirical evidence on entrepreneurial leadership's (EL) impact on innovation is limited and fragmented (G. Hoang et al., 2025). EL is theoretically crucial for cultivating a culture of proactiveness, innovativeness, creativity, risk-taking, and adaptability, which in turn influences organizational innovation performance (Chen, 2007; Freeman & Siegfried, 2015; Karol, 2015). But for these qualities to result in tangible innovation outcomes, they must be translated into operational practices that structure routines and guide behaviors due to the nature of innovation.

Therefore, literature has also explored several organizational factors as a mechanism through which leadership translates into innovation. Studies have identified several mediators, such as self-efficacy, commitment to change, organizational support for creativity, innovative environment, and knowledge sharing, as mediators and influencers of innovative behavior and innovation performance (Akbari et al., 2020a; Fatima & Masood, 2024; Li et al., 2020; Zheng et al., 2017). Nevertheless, these studies vary in focus and context and are not always generalizable across different industries.

Building on that literature, leadership rarely influences innovation directly; instead, it shapes an organization's systems, routines, and practices, which in turn impact innovation outcomes. Operational factors, such as Total Quality Management (TQM) practices, can provide a particularly suitable mediating mechanism, translating a leader's vision into tangible organizational performance and, ultimately, driving innovation. As a philosophy, it provides a comprehensive method for achieving organizational excellence with an emphasis on customer focus (Dawabsheh et al., 2019; Lal, 2008).

The increasing pressure to be innovative and remain competitive expanded the importance of TQM beyond its traditional quality role (Prajogo & Sohal, 2001). Literature has recognized TQM as a driver of different types of innovation (Moreno-Luzon et al., 2013a; Prajogo & Sohal, 2001). Practices such as customer focus, education and training, top management commitment, and products and process management can enhance innovation performance, creating strong grounds for incremental, product, and process innovation (Ooi et al., 2012).

Customer focus, as a core TQM principle, is the practice of prioritizing the customer’s needs throughout all organizational activities (Ahire et al., 1996), regularly assessing and adapting to dynamic customer expectations. Then, using this feedback to improve product quality to exceed expectations (Zhang et al., 2000). This focus is considered key to achieving long-term success and competitiveness.

Therefore, the study aims to address the gap and examine the relation between EL and innovation, integrating leadership and innovation concepts with operational excellence from TQM perspective. Hence, the study proposes a model in which customer focus mediates the relationship between EL and process and product innovation.

The study seeks to answer the following research question: **RQ1**: How does EL impact customer focus and innovation? **RQ2**: Can customer focus influence product and process innovations? **RQ**3: Does customer focus mediate the relation between EL and innovation?

The study aims to: 1) Review literature on EL, customer focus, and innovation. 2) Examine how EL impacts customer focus and how it impacts innovation. 3) Assess the mediating role of customer focus on the relationship between EL and innovation, focusing on how entrepreneurial behaviors influence customer focus practices and eventually product and process innovation. 4) Provide empirical evidence on the relationship based on the results.5) Advance theoretical understanding on the relation between EL, customer focus, and innovation. 6) Provide practical recommendations for firms seeking to balance innovation and customer focus.

2. Literature

2.2. Theoretical lens

The study builds on the Resource-Based View theory (RBV) and the Dynamic Capabilities theory (DC) perspectives. The RBV posits that organizations can achieve sustained advantage by leveraging their resources, which are valuable, rare, inimitable, and non-substitutable (Barney, 1991). Leadership has been viewed as a strategic resource due to its ability to direct and mobilize other organizational assets (Hitt et al., 2010; Michael A Hitt et al., 2013). Based on this view, EL, with its distinctive attributes and emphasis on vision, risk-taking, and innovativeness, exemplifies this role by shaping the strategic orientation of the organization.

The DC perspective extends RBV by highlighting the organization's need to build, reconfigure, and adapt resources in dynamic environments (Teece et al., 1997). DC core components include sensing opportunities, seizing them, and transforming the organization to maintain a competitive advantage. Building on this, EL effectiveness depends on organizational mechanisms that translate its, e.g., vision, innovativeness, proactiveness, and adaptability into action.

Customer focus, unlike other static operational capabilities, e.g., efficient manufacturing, can function as a dynamic capability that constantly interacts with the dynamic environment as it seeks to meet or exceed customer requirements by monitoring customer feedback (Zhang et al., 2000). Therefore, it can align organizational processes with customer needs, thereby translating leadership influence into process and product innovation. By combining RBV and DC, this study positions EL as a strategic resource whose innovation impact is realized through customer focus as a dynamic operational capability.

2.3. Entrepreneurial Leadership

2.3.1 Entrepreneurial Leadership and Innovation

Leadership is a widely studied, multidisciplinary field that attracts scholars from various backgrounds in sociology, psychology, and management (Asrar-ul-Haq & Anwar, 2018). While many researchers have defined the concept, there is no single universally agreed-upon definition. Leadership is described as the process of influencing a group's activities to help set and achieve their goals (Robbins, 2003; Stogdill, 1974). And as a concept can be viewed from different perspectives, including traits, behaviors, values, and attitudes.

Initial theories emphasized a leader's inherent traits, such as intelligence, insight, and responsibility (Mann, 1959; Stogdill, 1974). While later approaches shifted attention toward observable behaviors,

particularly task-oriented and relationship-oriented behaviors (Northouse, 2025). Contingency theories then emerged, highlighting the variation of leader behavior depending on situational factors (Horner, 1997) , and suggested that no single leadership style is universally effective (Hersey & Blanchard, 1969). Later, building on these developments, Burns introduced the distinction between transformational and transactional leadership (Burns, 2012). Illustrating that transformational leadership focuses on motivating followers by persuading them that organizational objectives are more important than personal ones, or that these objectives ultimately serve their own best interests. In contrast, transactional leadership emphasizes followers' self-interest, relying on a system of exchange to motivate performance (Burns, 2012).

More modern views extended beyond style and behavior to consider a leader's values and attitudes. Emerging perspectives such as authentic, ethical, and entrepreneurial leadership highlight the importance of integrity, innovation, and adaptability in contemporary organizational contexts (Avolio & Gardner, 2005; Brown & Treviño, 2006; Gupta et al., 2004).

The concept of El emerges at the intersection between entrepreneurship and leadership literature (Cogliser & Brigham, 2004). Scholars investigated these overlaps and identified a set of attributes, behaviors, and actions where both converge. Building on these characteristics, EL has been conceptualized as a leadership style that integrates entrepreneurial opportunity-seeking with leadership's capacity to mobilize people and resources (Gupta et al., 2004; Renko et al., 2015).

EL is distinguished by a range of characteristics that support entrepreneurial outcomes. These include vision, opportunity focus, influence, planning, motivation, achievement orientation, creativity, flexibility, persistence, patience, risk-taking, and an internal locus of control (Becherer et al., 2008; Cogliser & Brigham, 2004; Koryak et al., 2015; Renko et al., 2015; Thornberry, 2006). Collectively, these attributes enable entrepreneurial leaders to engage directly in opportunity-focused and exploitation activities while simultaneously shaping the behavior of their followers (Thornberry, 2006). And by acting as role models, entrepreneurial leaders demonstrate entrepreneurial behaviors in practice, providing tangible examples for others to follow (Chen, 2007). Also, they actively motivate followers to work toward entrepreneurial goals, thereby fostering a culture of initiative-taking and innovation within the organization (Gupta et al., 2004; Ireland, 2003a; Renko et al., 2015).

Moreover, entrepreneurial leaders challenge employees to think beyond established practices and to develop novel solutions. This is often reinforced by the articulation of a compelling vision for the future, which not only aligns organizational efforts but also empowers their team as agents of future innovation and the success of the organization (Thornberry, 2006).

Literature argues that EL can shape organizational contexts to support innovation by promoting openness, empowering employees, and encouraging experimentation (Renko et al., 2015). It examined and provided empirical confirmation on the relation between EL and the innovation process, and innovation performance (A. Fontana & Musa, 2017). Similarly, in a different context, EL showed a significant and positive impact on the innovation work behavior of employees in SME(Akbari et al., 2020b).

Building on the literature El is characterized by dimensions such as visionary thinking, risk-taking, proactiveness, opportunity recognition, and adaptability (Gupta et al., 2004). This makes it suitable for dynamic and uncertain environments, where innovation is necessary for organizational survival. Prior empirical studies provided support for the relationship between EL and innovation, indicating

that organizations led by entrepreneurial leaders can be more innovative in both product development and process improvement. Hence, the study hypothesizes:

H1 EL positively impacts innovation.

2.3.2. Entrepreneurial Leadership and Customer Focus

Literature shows that various leadership styles can significantly influence different sets of TQM practices, including customer focus, across contexts. Transformational, transactional, distributed, charismatic, servant, and strategic leadership were all found to have a positive influence on TQM practices' effectiveness (Teoman & Ulengin, 2018; Yadeta et al., 2022). Similarly, distributed, charismatic, and strategic leadership specifically were found to enhance TQM in manufacturing settings (Kiat Ng et al., 2013). Customer focus as a practice emphasizes aligning organizational processes with customer needs to ensure quality, reliability, and satisfaction (Ahire et al., 1996).

Building on that, EL, with its attributes of innovativeness, creativity, vision, passion, and risk-taking, can shape organizational priorities, particularly by strengthening customer focus principles. E Leaders can recognize the opportunity in satisfying the customers' needs and exploiting them. Hence, they can influence the extent to which organizations adopt a customer focus by articulating customer-oriented values, monitoring customer satisfaction, and rewarding efforts to improve. Therefore, the study hypothesis:

H2 EL positively impacts customer focus.

2.4. Customer Focus

2.4.1. Customer Focus and Innovation

Rooted in the work of quality pioneers like Crosby, Deming, and Juran, TQM is a comprehensive management philosophy defined by its principles, practices, and techniques, aiming to continuously improve the quality of products and processes to meet or exceed customer expectations (Dean Jr et al., 1994). It is a holistic management approach that emphasizes practices such as customer focus and continuous improvement (Zhang et al., 2000). TQM evolved from a strict focus on defect reduction and process control to a broader scope that encompasses principles, rather than a simple set of quality control tools.

Scholars have viewed TQM as a multidimensional concept, rather than a single practice (Ahire et al., 1996; Flynn et al., 1994; Saraph et al., 1989). In the literature, five core TQM practices are consistently recuring, customer focus, which ensures all activities are aligned with meeting customer needs; leadership and top management commitment, which stress quality as a strategic priority; training and education, which empowers all employees with the necessary skills; teamwork, which promotes collaborative problem-solving; and a supportive organizational culture that values and rewards quality excellence (Reed et al., 2000).

Customer focus is an organizational commitment to understanding and responding to the evolving customers' needs through the collection of complaint information, market investigations, and customer satisfaction surveys. Taking these insights into processes and product development, to achieve customer satisfaction and build long-term loyalty (Zhang et al., 2000).

The concept has been applied in multiple fields with varying emphases. In the market orientation and innovation literature, customer focus refers to a strategic orientation in which firms generate,

disseminate, and respond to customer needs and preferences to guide innovation activities (Slater & Narver, 1995). This orientation is primarily anticipatory, aligning innovation with evolving market opportunities. In contrast, customer focus from the TQM perspective, as applied in this study, emphasizes customer requirements through continuous improvement, process reliability, rather than serving primarily as a strategic capability for anticipating future markets.

A growing body of scholars has argued that TQM not only enhances operational efficiency but also creates the necessary organizational conditions to influence and foster innovation (Prajogo & Sohal, 2001, 2003). Literature examined whether TQM and business innovation are compatible, stressing that TQM dimensions can assist organizations to be more innovative (Martínez Lorente et al., 1999).Further studies also confirmed the positive effect of TQM practices on incremental innovation directly and on radical innovation indirectly through cultural change (Moreno-Luzon et al., 2013b). In developing countries' context, TQM practices, e.g., leadership and people management, process and strategic management demonstrated a positive impact on organizational innovation performance (D. T. Hoang et al., 2006a).

Building on prior literature, organizational customer focus can drive continuous improvements in internal processes, radical or incremental adjustments to products. Organizations monitor customer feedback and align their internal processes with customer requirements, enhancing process efficiency and reliability. While product innovation can emerge from the refinements and continues improvements of product features to satisfy customers' needs. Hence, the study hypothesizes:

H3 Customer Focus positively impacts innovation.

2.4.2. Customer Focus Mediation

From the RBV perspective, organizations achieve sustainable competitive advantage by leveraging valuable, rare, inimitable, and non-substitutable resources (Barney, 1991). Leadership, particularly EL, constitutes such a strategic resource because of its capacity to mobilize vision, risk-taking, and creativity toward opportunity exploitation (Gupta et al., 2004). Their ability to organize other resources and influence other capabilities (Hitt et al., 2010; Michael A Hitt et al., 2013). However, resources alone are insufficient; their value depends on how they are deployed within organizational processes and routines.

The DC perspective extends this argument by stressing the importance of firms' abilities to integrate, build, and reconfigure resources in response to changing environments (Teece et al., 1997). EL provides the attributes necessary to sense and seize opportunities, but the translation into innovation outcomes requires dynamic operational mechanisms.

Customer focus as an organizational practice enables organizations to systematically gather, interpret, and respond to customer needs, thereby channeling leadership attributes into practices that foster both process and product innovation. Hence, customer focus functions as a mediating capability that operationalizes the influence of EL. Entrepreneurial leaders may articulate vision and stimulate risk-taking, but without customer-oriented routines, these efforts risk becoming misaligned with market demands. By embedding customer focus, organizations transform entrepreneurial intent into actions that enhance innovation performance. Hence, building on prior discussion, the study hypothesizes:

H4 Customer focus mediates the relation between EL and innovation.

3. Methods

The study adopts a quantitative research methodology and utilizes a cross-sectional survey design. Data collection was done through a self-administered questionnaire developed using Google Forms. The target population for this research consists of employees in the private sector of Saudi Arabia. However, due to constraints in accessing a complete sampling frame of private sector employees and the fact that the study seeks to examine theoretical relationships between leadership, customer focus, and innovation rather than to generalize findings to a wider population (Saunders et al., 2009), a non-probability convenience sampling method was employed. Although this approach limits the generalizability of the results, it is an appropriate, faster, and cost-effective method for obtaining insights (Stratton, 2023).

To effectively address the research objectives and ensure clarity, the structured questionnaire was adapted to the study's context, and all questionnaire items were translated into Arabic. A seven-point Likert scale is employed for all study variables, allowing for the assessment of participant perceptions.

To assess EL, the research will adopt ENTRELEAD Scale (10) items from (Renko et al., 2015).The scale is widely used and validated to measure EL. To measure Customer Focus**,** the study adopts (Ahire et al., 1996), (4) items, to evaluate how effectively customer input is integrated into quality management practices and how committed the organization is to responding to customer needs.

For hypothesis testing and model estimation, the study will employ Partial Least Squares Structural Equation Modelling (PLS-SEM). This technique is appropriate for the hypothesized relationships and the constraints of the sample size (Hair et al., 2019b). Additionally, IBM SPSS will be utilized to conduct descriptive statistical analyses, providing a comprehensive overview of the data characteristics.

4. The analysis

4.1. Sample profile

The required sample size was determined using G power analysis, for a medium effect size $f^2 = 0.15$, $\alpha = 0.05$, and power = 0.80, with 2 predictors, the minimum required sample size was 55 (Cohen, 1988; Faul et al., 2009). The study sample consists of N=129 respondents, surpassing the 55 threshold. However, the sample size is relatively small compared to the larger samples often recommended for structural equation modeling (SEM). Although the current sample was adequate, it limits the generalizability of the findings and diminishes the ability to identify smaller effect sizes within the model.

The demographic composition of the sample was predominantly male 85.3%, (n = 110), compared to female 14.7%, (n = 19), which also represents a limitation. The sample encompasses various organizational settings, and participants possess different levels of educational background. Nearly half of the respondents, 47.3%, held a bachelor's degree, 33.3% held a master's degree, and 10.1% held a doctoral degree, while only 3.9% reported having a high school education. Participants also represented a broad range of hierarchical positions within their organizations. 27.1% were at the employee level, while 25.6% in middle management, and 20.2% held supervisory management positions. Finally, top management was represented by 19.4%. Respondents represent a diverse range

of economic sectors such as education, service, industrial, etc. The rest of the results as illustrated below in Table 1.

Demographic Indices	Categories	Frequency	Percent (%)
Gender	Male	110	85.3
	Female	19	14.7
Education Level	High School	5	3.9
	Bachelor	61	47.3
	Master	43	33.3
	Doctorate	13	10.1
	Other	7	5.4
Administrative Level	Employee Level	35	27.1
	Supervisory Management	26	20.2
	Middle Management	33	25.6
	Top Management	25	19.4
	Other	10	7.8
Business Sector	Industrial	16	12.4
	General Commercial	4	3.1
	Agricultural	3	2.3
	Services	11	8.5
	Professional	7	5.4
	Finance	11	8.5
	Real Estate	3	2.3
	Tourism	3	2.3
	Technical/Information	1	0.8
	Healthcare	6	4.7
	Education	25	19.4
	Construction	7	5.4
	Other	32	24.8
Organization Size (# of Employees)	Less than 50	22	17.1
	50–100	20	15.5
	101–500	18	14
	501–1000	10	7.8
	More than 1000	59	45.7
Organization Age	Less than 5 years	13	10.1
	5–10 years	17	13.2
	11–25 years	30	23.3
	26–40 years	14	10.9
	More than 40 years	55	42.6
Region	Southern Region	6	4.7
	Northern Region	2	1.6

Western Region	71	55
Eastern Region	4	3.1
Central Region	46	35.7

Table1. Sample profile

4.2. The assessment of the measurement model

To address the study objectives, the study employs Partial Least Squares Structural Equation Modeling (PLS-SEM) to evaluate both measurement and structural models and estimate path relationships, and test for mediation effects.

The measurement model was assessed to ensure reliability and validity. After initial assessment, several indicators were removed from the model; items (EL3, EL4, EL6, EL9, and EL10) were deleted from the EL construct due to low outer loadings (< 0.70) and signs of collinearity (high VIF values). Similarly, (INNO PT3 and INNO PT4) were excluded from the Innovation construct for collinearity concerns. This decision is consistent with literature recommendations for refining reflective measurement models, which suggest the removal of indicators with weak loadings or redundancy to improve construct reliability (Hair et al., 2019b).

The revised measurement model was evaluated for reliability, convergent, and discriminant validity. The study shows that all outer loadings exceeded the threshold of **0.7**, confirming the correlation between items and constructs (Hair et al., 2019b). To assess internal consistency reliability, the study examines Cronbach's alpha and composite reliability. The findings show all values exceeded the recommended threshold of ≥0.70, thus confirming the measures' internal consistency reliability as seen in Table 2 (Hair et al., 2019a) .To assess convergent validity, the study examined average variance extracted AVE values, and findings surpassed the threshold of 0.50 (Sarstedt et al., 2022), confirming convergent validity.

Construct	Item	Outer Loading	Cronbach's Alpha	Composite Reliability	AVE
CF	CF1	0.825	0.846	0.896	0.683
	CF2	0.79			
	CF3	0.881			
	CF4	0.804			
EL	EL1	0.874	0.905	0.929	0.724
	EL2	0.857			
	EL5	0.82			
	EL7	0.863			
	EL8	0.837			
INO	INNO PC1	0.901	0.960	0.966	0.757
	INNO PC2	0.854			
	INNO PC3	0.87			

INNO PC4	0.823
INNO PC5	0.903
INNO PT1	0.795
INNO PT2	0.864
INNO PT5	0.915
INNO PT6	0.897

Table 2. Loadings values, Cronbach's alpha, composite reliability, average variance extracted (AVE), Note. EL= Entrepreneurial Leadership, CF= customer Focus, INO= Innovation

Additionally, the study evaluates discriminant validity by examining Fornell Larcker Criterion and The Heterotrait-Monotrait Ratio of Correlations (HTMT). First, the Fornell-Larcker Criterion results display the diagonal values of AVE square roots higher than off-diagonal correlations (Fornell & Larcker, 1981). While the HTMT values are below the cutoff of 0.85, both results confirm the constructs' discriminant validity (Henseler et al., 2015). Therefore, the measurement assessment indicates that the model meets all requirements.

	CF	**EL**	**INO**
CF			
EL	0.707		
INO	0.769	0.652	

Table 3. The Heterotrait Monotrait Ratio of Correlations (HTMT).

	CF	**EL**	**INO**
CF	**0.827**		
EL	0.624	**0.851**	
INO	0.705	0.613	**0.870**

Table 4. Fornell-Larcker Criterion results.

4.3. Structural model assessment

The next step is to evaluate the structural model to test the hypothesized relationships among latent variables and assess the model's predictive capabilities. The study employs bootstrapping (n = 5000 subsamples) to examine the significance of the path coefficients, the indirect effects, and finally the predictive relevance of the model. Before estimating the structural paths, the study examines the model for possible multicollinearity through the Variance Inflation Factor (VIF) values, which were all within an acceptable range (Hair et al., 2017) .Hence, confirming the absence of problematic multicollinearity as seen in Table 5.

	VIF
CF1	2.056
CF2	1.884
CF3	2.281
CF4	1.756
EL1	3.591
EL2	3.439

EL5	2.155
EL7	2.528
EL8	2.283
INO PC1	4.604
INO PC2	3.358
INO PC3	4.097
INO PC4	2.880
INO PC5	4.713
INO PT1	2.632
INO PT2	3.746
INO PT5	5.678
INO PT6	5.436

Table 5. VIF

4.4. The path coefficients

The direct path from EL → INO (β = 0.283, t = 3.745, p = 0.000) reveals a weak but still statistically significant impact, which shows that leadership can directly influence innovation within the organization. Hence, H1 is supported. Also, the direct path coefficients findings illustrate that the path from EL →CF (β = 0.624, t = 10.576, p < 0.001) demonstrates a strong and statistically significant influence, indicating that higher levels of EL can influence greater adoption of customer focus practice across the organization. Hence, H2 is supported. While the path from CF →INO (β = 0.528, t = 8.361, p < 0.001) also reveals a strong and statistically significant impact, thus confirming that customer-oriented firms are more likely to have higher rates of product and process innovation. Hence, H3 is supported.

Hypotheses	Relationship (β)	Sample mean (M)	(STDEV)	T Value	P values	Results
CF → INO	0.528	0.532	0.063	8.361	0.000	Supported
EL → CF	0.624	0.629	0.059	10.576	0.000	Supported
EL → INO	0.283	0.281	0.076	3.745	0.000	Supported
EL → CF → INO	0.330	0.335	0.051	6.439	0.000	Supported

Table 6. Significant testing results of the structural model path coefficients and mediation results, Note. EL= Entrepreneurial Leadership, CF= customer Focus, INO= Innovation

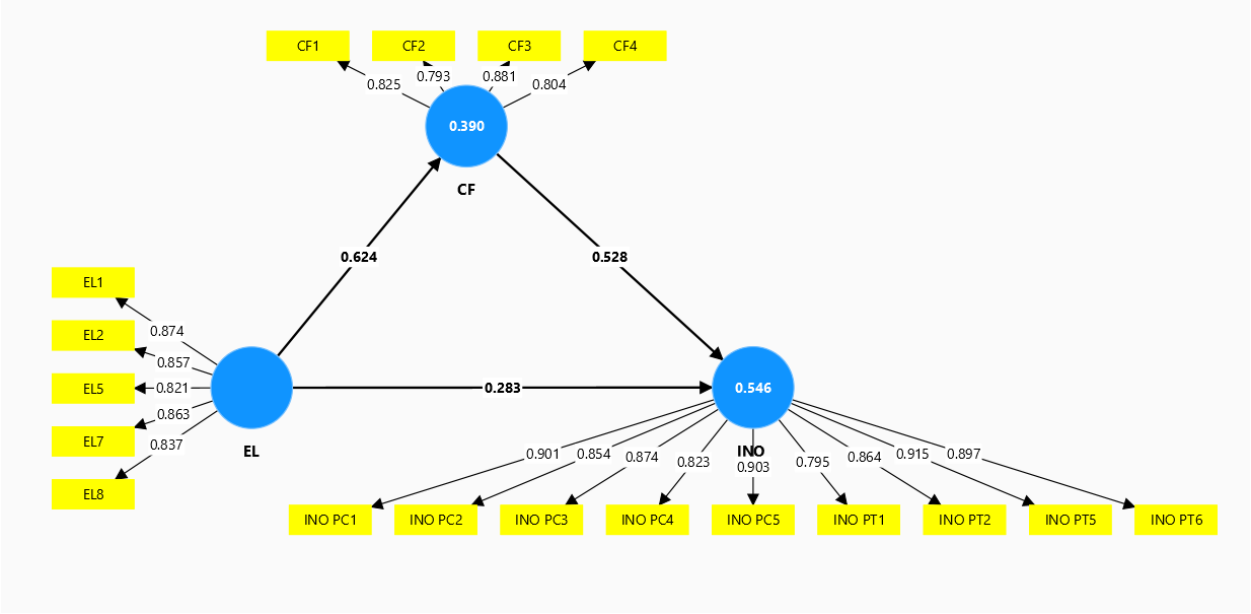

Figure 1. Note. Values on the model arrows are Outer Loading and Beta Values β

Then the study assesses the mediating role of CF between EL and innovation by examining the indirect effects. The findings show that the indirect path from EL → CF → INO (β = 0.330, t = 6.439, p < 0.001) demonstrates a strong and statistically significant mediating effect. This suggests that customer focus serves as a significant mechanism through which entrepreneurial leadership influences innovation. Hence, H4 is supported.

4.5. The coefficient of determination (R^2)

The coefficient of determination (R^2) represents the proportion of variance in each endogenous construct that is explained by its exogenous predictors and serves as a key indicator of the predictive power of the structural model (Sarstedt et al., 2022). The results indicate customer focus has an R^2 value of 0.390, suggesting that EL explains approximately 39.0% of the variance in it. While INO has an R^2 value of 0.546, meaning that EL and customer focus together explain 54.6% of the variance in innovation. These findings reflect a satisfactory level of explanatory power (Cohen, 1988). Hence, the model is statistically robust and underscores the importance of both EL and customer focus strategies in driving organizational innovation.

	R^2	R^2 adjusted	P values
CF	0.390	0. 385	0.000
INO	0.546	0. 539	0.000

Table 7. R^2 and R^2 adjusted

4.6. The F^2 Effect size

The study examined the F^2 to evaluate the effect of the independent variables EL and CF on innovations. According to Cohen guidelines, the F^2 values are interpreted as follows: (0.02) is small, (0.15) medium, and (0.35) large effect (Cohen, 1988). The path EL → CF had an f^2 of 0.639, which indicates a large effect size. While the path CF → INO had an f^2 of 0.376, which is also as a large effect, highlighting that customer focus is a major driver of innovation. Finally, the path EL → INO had a small effect. Hence, the direct influence of EL on innovation is limited without the mediating role of customer focus.

	CF	EL	INO
CF			0.376
EL	0.639		0.108
INO			

Table 8. Effect size F^2

The combined interpretation of f^2 and R^2 confirmed that CF is a key mediating and explanatory construct. It emphasizes the strategic role of EL in supporting customer-oriented practices and culture, which in turn serves as the foundation for innovation in both processes and products.

4.6. Q^2predict

The study employs a blindfolding procedure to examine the model's predictive relevance. The results show that Q^2 values are all above zero, confirming the model's predictive relevance as seen in Table 9 (Geisser, 1975; Stone, 1974) .

	Q^2predict	RMSE	MAE
CF	0.376	0.806	0.635
INO	0.365	0.811	0.630

Table 9. Q^2predict

5. Discussion

The study aimed to investigate the relationship between EL and innovation, and the mediating role of customer focus. The findings provide strong empirical support for the theorized relationships.

First, on the relation between EL and innovation, the findings confirm that EL directly influences process and product innovation, aligning with prior literature that highlights the strategic role of leadership in fostering innovative outcomes, e.g. (Akbari et al., 2020a; A. Fontana & Musa, 2017; Matzler et al., 2008; OKE et al., 2009b; Prasad & Junni, 2016; Zheng

et al., 2017). Entrepreneurial leaders can articulate a clear vision, encourage opportunity recognition, and tolerate risk-taking, all of which stimulate creativity and experimentation within organizations (Chen, 2007; Ireland, 2003b; Koryak et al., 2015). This direct influence aligns with RBV, which stresses the critical intangible resources' ability to shape organizational capabilities and competitive advantage (Barney et al., 2001). In this case, leadership represents the strategic resource that can influence organizational capabilities and organize other valuable resources (Freeman & Siegfried, 2015; Koryak et al., 2015; Michael A Hitt et al., 2013).

Similarly, the results confirm that EL positively influences customer focus, indicating that entrepreneurial leaders recognize and exploit the opportunities that exist in understanding customer needs. Hence, they create an environment where customers' needs guide the decision-making, aligning with literature in that perspective, e.g., (Bouranta, 2020; Kiat Ng et al., 2013; Lakshman, 2006; Teoman & Ulengin, 2018; Yadeta et al., 2022). This view also aligns with RBV and DC perspectives, emphasizing that leadership enables the reconfiguration of organizational routines toward market responsiveness through these practices (Teece et al., 1997).

The findings also show that customer focus strongly influences process and product innovation. which align with TQM and innovation literature (D. T. Hoang et al., 2006b; Martins & Terblanche, 2003; Moreno-Luzon et al., 2013a; Prajogo & Sohal, 2001, 2003). This indicates that operational customer-oriented practices enable organizations to identify quality gaps and reduce inefficiencies with a focus on customers' needs (Zhang et al., 2000). This, in turn, aligns product development efforts with evolving market expectations. Hence, organizations that systematically collect and act on customer insights are better positioned to redesign internal processes for efficiency and to introduce new or improved products that meet customer requirements.

While EL directly affects process and product innovation, the results show that its impact is substantially enhanced when mediated by customer focus. Although entrepreneurial leaders can independently stimulate innovation through vision articulation, proactiveness, and risk-taking. The influence of leadership into sustained innovation outcomes requires operational mechanisms that embed customer needs into organizational routines. This mediating role of customer focus aligns with views that stress organizational practices acting as the bridge between leadership behaviors and performance outcomes (Akbari et al., 2020b; Fatima & Masood, 2024; A. Fontana & Musa, 2017; Li et al., 2020). Specifically, operational capability, such as customer focus practices. Therefore, these findings highlight customer focus as a dynamic capability critical for innovation success.

The findings advance literature by illustrating that EL not only directly influences innovation but also relies on customer focus as a complementary capability that enhances product and process innovation. The integrated perspective addresses how leadership and organizational practices interact to shape innovation outcomes.

This study offers several theoretical contributions. First, it advances leadership and innovation literature by integrating EL with customer focus practices to explain product and process

innovation outcomes. Second, the study contributes to RBV and DC literature as it shows that EL in this context represents a strategic organizational resource, while customer focus functions as a dynamic capability. The study positions customer focus as a mediating mechanism expanding its role beyond traditional quality management, framing it as a strategic capability essential for innovation.

From a practical perspective, the findings offer valuable insights for managers, organizational leaders, and entrepreneurs aiming to strengthen innovation performance. First, organizations seeking to enhance their innovative capacity should invest in leadership development programs designed to cultivate EL attributes among employees at all levels. The aim should be to foster creativity, opportunity recognition, and proactive decision-making. Such programs can empower leaders to act as catalysts for innovation across different organizational levels. Second, the results highlight the importance of institutionalizing customer focus practices through operational strategies that integrate R&D and technology management with market insights. This ensures that innovation efforts remain strategically aligned with customer needs. Furthermore, fostering bidirectional collaboration with customers through continuous feedback supports ongoing improvement and strengthens competitive differentiation. Third, organizations should focus on the integration of EL with customer-focused routines. This alignment enhances their ability to translate strategic intent into tangible products and process innovations.

In the context of entrepreneurship and innovation in Saudi Arabia, organizations developing their EL attributes and customer-centered innovation practices can enhance the competitiveness of Saudi industries, supporting the objectives of Vision 2030, which aspires to position the Kingdom as a leading global competitor. Additionally, improved innovation performance contributes to economic diversification and job creation, reinforcing national efforts to expand high-value industries that drive sustainable growth and employment opportunities.

While the study provides important empirical insights, it has several limitations. First, the study adopts a cross-sectional design, which limits the model's ability to determine causality. Additionally, it employs a self-reported survey, which can introduce bias(Podsakoff et al., 2003). Finally, the study's small sample size and method can also limit generalization(Stratton, 2023).

While the study establishes the mediating role of customer focus, future researchers should investigate other TQM practices' role in influencing innovations. Similarly, other organizational practices, cultural aspects, and organizational capabilities, such as knowledge management, collaboration culture, and digital transformation capabilities, may also present channeling mechanisms through which EL influences innovation outcomes. Future studies could also incorporate additional moderators to develop a more comprehensive understanding of how EL translates into innovative performance. Additionally, cross-industry or cross-country comparative studies would also be valuable to examine the generalizability of the study findings across diverse organizational and institutional environments. While future researchers may also employ qualitative or mixed-method approaches to explore how leaders

and employees interpret and implement customer focus practices in real organizational contexts, and how they influence innovation outcomes. These approaches would reveal the behavioral mechanisms of the actual influence.

Conflicts of Interest

The author declares no conflicts of interest.

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