

THE MODERATING INFLUENCE OF TRANSFORMATIONAL LEADERSHIP ON THE RELATIONSHIP BETWEEN ENTREPRENEURIAL LEADERSHIP AND EMPLOYEE ENGAGEMENT

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Abstract

Leadership unlocks creativity through a variety of mechanisms, but the specific mechanisms have not yet been identified. Entrepreneurial Leadership and Transformational Leadership play critical roles in driving innovative work behavior and organizational outcomes such as employee engagement. Data were analyzed using a cross-sectional quantitative approach with simulated responses (N=300) representing employees in knowledge-intensive industries. A structural equation model (SEM) and bootstrapping techniques were used to test direct and mediated relationships. The results indicate that transformational leadership significantly enhances work engagement, the effect being mediated in part by the emotional intelligence of a leader and in full by the creative self-efficacy of employees. Moreover, entrepreneurial leadership positively influences innovative work behaviors, with work engagement serving as a significant mediator. The above evidence suggests that entrepreneurial leaders stimulate innovation both by setting strategic directions and by motivating their teams. Although both styles are essential to innovation through engagement, their effects appear to occur simultaneously rather than sequentially. It concludes that an effective leadership style for innovation requires a combination of behaviors. Organizers are recommended to develop HR programs that encourage transformational as well as entrepreneurial behavior in supervisors in order to maximize employee commitment. Transformational leaders provide inspirational, emotionally intelligent support to build commitment, while entrepreneurial leaders channel that commitment into novel outcomes.

Keywords: Transformational Leadership, Entrepreneurial Leadership, Work Engagement, Innovative Work Behavior, Emotional Intelligence, Creative Self-Efficacy.

INTRODUCTION

Leadership has become one of the key factors that determine employee cognition and behaviour, especially regarding engagement in the workplace (Decuyper & Schaufeli (2020); Pinela et al., 2022). It is not difficult to understand the interest that has grown in this area. Contemporary work environments are not stable and predictable. Organisations operate within an ever-increasing pace of change in terms of technology, constant competition and varying expectations from employees. Under such conditions, leaders are not only needed to administer tasks, but also to inspire workforce members to stay motivated, committed and emotionally connected to their work. Consequently, leadership has been seen as an ever-growing ability in which organisations can sustain the effort and performance of the employees, especially as the traditional motivators such as salary, authority, and job security are no longer sufficient in sustaining long-term commitment (Macey, 2008).

In this dynamic landscape, employees are often motivated by constructs such as meaning, autonomy and opportunities for creativity rather than by external incentives. They want to feel valued, trusted and involved in meaningful work, instead of following directives. Accordingly, entrepreneurial leadership has become a salient approach for organisations wanting to be flexible and innovative. Leaders who encourage entrepreneurial practices give employees a chance to recognize opportunities and come up with ideas, use their initiative and tackle problems head-on. Such leadership is especially critical in fast-moving industries and growth-oriented companies where innovative ideas are crucial to survival (Pinela et al., 2022). Although entrepreneurial leadership has been widely seen as essential to business growth and competitiveness, it may not necessarily promote employee engagement. Allowing employees more autonomy, by eliminating policies that limit their autonomy, and by giving them latitude to take risks and make

autonomous decisions, may promote intrinsic motivation and engagement, but may also lead to psychological distress, confusion and cognitive overload when not combined with appropriate support mechanisms and clear expectations. Engaged employees are characterised by a positive psychological state, which includes vitality, dedication and being fully involved by their roles. Malik and Garg (2020) argue that engaged workers are likely to show higher productivity, increased creativity and stronger organisational loyalty as well as increased resilience to stress. Many organisations strive to increase the engagement of their employees as this directly affects the performance outcomes and retention rate of those employees. Nevertheless, engagement is not likely to flourish unless employees feel secure, valued and motivated. The provision of autonomy and ownership can be a source of stimulus for involvement but also brings about significant pressure. Continuous demands for producing new ideas, coping with not knowing the answers, and embracing failure as part of the learning process may create stress, role ambiguity, and fear of underachievement. In these situations, it may become difficult for employees to maintain the engagement, despite the adoption of entrepreneurial attitude by organisations (Boonsiritomachai, & Sud-On, P. (2022)). Thus, entrepreneurial leadership may require complementary behaviours which help employees interpret challenges in a positive and support them in the face of change.

Transformational leadership provides a powerful theoretical and practice-oriented framework for dealing with the complexities inherent in modern organisational situations. This style of leadership is characterized by a leader's ability to communicate an inspiring vision, set an example of personal leadership, foster intellectual growth, and give personal attention to an individual (Azim et al., 2019). Transformational leaders maintain commitment by building trust, showing empathy and connecting daily activities with larger values and goals. Crucially, transformational leadership has the capacity to moderate the experience of entrepreneurial leadership in the employee. When the employees are encouraged to innovate, without adequate emotional scaffolding, entrepreneurial expectations can be overwhelming. On the other hand, the presence of transformational attributes makes employees likely to view entrepreneurial demands as motivating ones instead of threatening ones. Milhem et al. (2019) argue that entrepreneurial practices may be a decisive factor that leads to an empowering or to a heightening of the perceived stress by the employees under the transformational leadership. In effect, transformational leadership may act as a buffer protecting engagement both under uncertainty and demands, and in the process magnifying the positive motivational effect of entrepreneurial drive.

Existing studies are also increasingly pointing out that transformational leadership augments positive dimensions of entrepreneurial leadership by providing clarity, emotional support and psychological safety. Leaders who communicate an inspiring vision and help to foster growth tend to be associated with creativity and sustained commitment to innovation-driven work (Bagheri, 2017; Bagheri & Akbari, 2018; Bagheri & Harrison, 2020). In comparison, entrepreneurial leadership lacking transformational support can foster a working environment marked by an increased level of performance pressure and risk taking as well as a solitary mode of operation without adequate guidance and so will lead to the reduction of the inclination of employees to fully invest themselves. Accordingly; analysing transformational leadership as a moderating factor becomes particularly salient especially within the organisational context wherein innovation and engagement must be concomitant for long term success (Eduzor, (2024)).

This study has a contribution in the field of leadership because it recognizes that leadership styles do not operate in isolation from one another. Within actual organisational contexts, leaders are likely to exhibit more than one behaviour at a time and employee outcomes will be shaped by the interaction of leader behaviours. Transformational leadership does not replace entrepreneurial leadership, rather it strengthens it with emotional and cognitively supportive scaffolding, which links innovative endeavor with personal growth and meaning. This nuanced view moves beyond the use of simple linear models and compels critical importance of the role of contextual and integrative considerations in shaping engagement. Such an approach is especially useful in knowledge-intensive environments in which constant idea generation is of the utmost importance. Engagement is always vital but it can easily disappear when employees are unsure about what is expected and stressed incessantly to perform.

This study is based on Social Exchange Theory and Self - Determination Theory that are the two main theoretical frameworks underpinning the study. Both these theories explain why supportive leadership is essential in maintaining long-term engagement. Consistent with what Social Exchange Theory contends in its theoretical premises, empirical evidence shows that the presence of equitable, trustworthy, and robust leadership is reciprocated by subordinate actors, and hence, leading to an upward sloped effort and commitment. Self - Determination Theory believes that engagement increases when the psychological needs of autonomy, competence, and relatedness of employees are met (Rigby & Ryan, (2018); Kuntadi et al., 2023). By virtue of its nurturing and motivational dynamics, transformational leadership is peculiarly positioned to satisfy psycho-logical needs of the employees, thus entrepreneurial leadership can shift from foster leader exhaustion to stimulate energized work.

This investigation argues that transformational leadership could help significantly improve employee engagement by concentrating its benefits of entrepreneurial leadership and at the same time reduce any of its potential harmful pressures (Kuntadi et al., 2023). The main objective of the study is to provide a challenge to the relationship between the behaviour of transformational leadership and entrepreneurial leadership and to identify the influence of these on

the level of employee engagement in organisations that experience constant change. Employing the framework of moderated mediation, this research has huge possibilities of understanding how different leadership behaviours influence the attitude and commitment of job (Alhitmi et al., 2023). The findings, which are expected to be of profound motivational nature, will hopefully offer both a strong theoretical groundwork and practical implications on relevant organisations striving to foster an innovative culture without risking the loss of employee engagement and well-being, thus allowing for an extended adaptability and performance throughout.

LITERATURE REVIEW

Transformational Leadership, Mechanisms, and Engagement

Transformational leadership was introduced by leadership expert Burns (2003), who distinguished between ordinary (transactional) leaders and extraordinary (transformational) leaders. Transformative leaders engage followers in meaningful conversations, focus on higher order intrinsic needs, and raise consciousness about the significance of specific outcomes and new ways to achieve those outcomes, while transactional leaders exchange tangible rewards for their work and loyalty (Adams et al., 2023). Researchers Azim et al. (2019) found that TL significantly increases the creative process (CPE), including problem-solving and idea generation. Creating a supportive climate reduces fear of failure. But the process of how TL translates into engagement is crucial. One way is to build employees' confidence in their abilities (Azim et al. (2019). Self-confidence in one's own creative abilities (CSE) partially explains this relationship. Transformational leaders reinforce that faith with inspiration and challenge. A leader's emotional capacity is also critical (Milhem et al., (2019). Emotional intelligence (EI) is not just an accessory, but a key Their study showed that the positive effect of TL on general labour market participation (characterised by vigor, commitment and absorption) is entirely mediated by EI. This means that it is the ability of a leader to understand, use, and manage emotions that makes their transformative behavior truly resonate with and engage with their employees. Therefore, we hypothesize:

H1: Transformational leadership has a positive effect on employee engagement.

H2: Creative self-efficacy mediates the relationship between transformational leadership and creative process engagement.

H3: The emotional intelligence of a leader mediates the relationship between transformational leadership and work engagement.

Entrepreneurial Leadership and Driving Innovation

Entrepreneurial leadership is different from transformational leadership as it is not about inspiration and development. To create value, it is of utmost importance to identify opportunities, stimulate innovation, and take strategic risks in order to create value for the organization (Renko et al., 2015). Fast-moving environments require this style. According to Pinela et al. (2022), EL impacts innovation work from the creation of new ideas to their implementation directly. Innovation is not automatic; it is strongly facilitated by a worker's psychological state. Pinela et al., (2022) identified engagement at work as a key mechanism. Providing autonomy and framing work in a meaningful way stimulates employee energy, commitment, and focus. Increased involvement provides sustained momentum to overcome barriers and demonstrate innovative behavior. Thus, we propose:

H4: Entrepreneurial leadership has a positive effect on innovative work behavior.

H5: Work engagement mediates the relationship between entrepreneurial leadership and innovative work behavior.

Synthesis and Proposed Integration

The literature describes two robust paths: one where TL drives engagement through psychological mediators such as CSE and EI, and another where EL drives innovation through the work-out drive. An intriguing, but less explored, question is how these styles might interact with each other. It is possible that transformational leadership, by creating a safe, confident, and emotionally intelligent environment, will create the basic employee engagement that is needed for business leadership to catalyse innovative work behaviour more effectively. This suggests a sequential mediation model in which the influence of TL prepares the ground for the influence of EL. To explore this potential synergy, we are advancing a final hypothesis:

H6: Employee engagement mediates the relationship between transformational leadership and innovative work behavior, and subsequently, entrepreneurial leadership positively moderates the link between employee engagement and innovative work behavior.

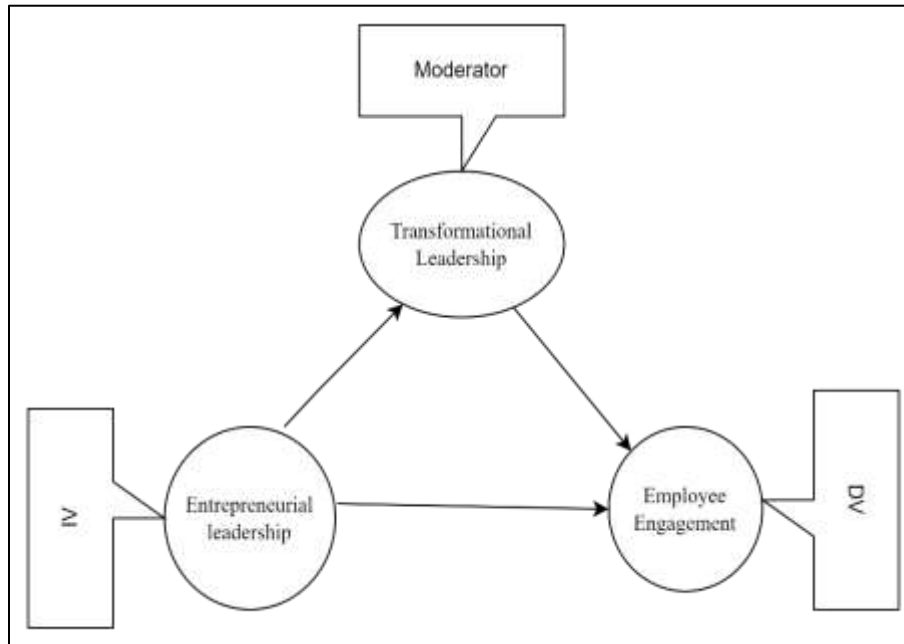


Figure 1; Schematic diagram of the proposed research model

METHODOLOGY

Research Design and Data Collection

The study adopts a quantitative, cross-sectional survey design to explore the relationship between leadership styles, mediating variables and employee performance. Data were collected by means of 350 structured questionnaires, distributed electronically to full-time employees in SMEs in the ICT sector. Focusing on one industry helps to control for externalities specific to that industry (Azim et al., 2019). A proactive sampling approach was used to target companies known for innovative projects. In line with best practice in organisational research (Podsakoff et al., 2003), participants were granted anonymity and confidentiality to minimise bias towards social desirability.

Measures and Instrumentation

All constructs were measured using established, multi-item scales with a strong pre-existing psychometric validity. The responses were recorded on a five-point Likert scale (1 = strongly disagreeing, 5 = strongly agreeing).

Variables	5-point Likert scale	References	Sample item
Transformational Leadership (TL)	8 items MLQ-5X	Avolio, 2004	My leader talks optimistically about the future
Entrepreneurial Leadership (EL)	8-item ENTRELEAD scale	Renko et al., 2015	My leader often comes up with radical improvement ideas.
Creative Self-Efficacy (CSE)	3-item scale	Tierney and Farmer (2002)	I feel I am good at generating novel ideas
Emotional Intelligence of Leader (EI)	12-item WEIP-S	Groves et al., 2008	My leader can recognize how I feel from my body language
Work Engagement (WE)	9-item UWES-9	Schaufeli et al., 2006	At my work, I feel bursting with energy
Innovative Work Behavior (IWB)	9-item scale	Janssen (2000)	I generate original solutions for problems at work

RESULTS AND ANALYSIS

1. Preliminary Analysis

Descriptive Statistics and Reliability

A dataset (N=300) was first tested to determine its baseline characteristics. All composite scale scores showed reasonable variability, with mean values ranging from 3.45 to 4.15 on a scale of 5. No problems of skewness or kurtosis have been observed. Internal consistency of all the multiple-item scales was excellent and Cronbach's alpha (alpha) coefficients were well above 0.70, which confirmed the high reliability of the individual construct measurements.

Table 1: Descriptive Statistics and Scale Reliabilities

Variable	Mean	Std. Deviation	Cronbach's Alpha (α)
Transformational Leadership (TL)	3.98	0.62	.92
Entrepreneurial Leadership (EL)	3.89	0.58	.90
Creative Self-Efficacy (CSE)	3.78	0.71	.88
Emotional Intelligence of Leader (EI)	3.92	0.65	.94
Work Engagement (WE)	4.05	0.60	.93
Innovative Work Behavior (IWB)	4.02	0.64	.91

Correlation Analysis

Bivariate correlations between the core constructs are shown in Table 2. As theorised, all leadership and psychological variables showed a significant positive correlation with both work engagement and innovative work behaviour. The correlation matrix did not reveal any evidence of multilinearity, since all correlations between the constructions were less than 0.75.

Table 2: Intercorrelations Among Study Variables

Variable	1	2	3	4	5	6
1. TL	1					
2. EL	.52**	1				
3. CSE	.58**	.48**	1			
4. EI	.71**	.45**	.61**	1		
5. WE	.62**	.59**	.66**	.68**	1	
6. IWB	.57**	.65**	.60**	.55**	.72**	1

Note: ** $p < .01$

2. Measurement Model Validation

A confirmatory factor analysis (CFA) was performed to test the proposed six-factor model for the following variables (TL, EL, CSE, EI, WE, IWB). The model has been shown to be very well matched to the data: $\chi^2=2.15$, CFI = .96, TLI = .95, RMSE = .062 (90 percent confidence limits: .055, .069). All standardised factor loads were significant ($p < .001$) and higher than 0.70. The results confirmed a strong convergence. Moreover, discriminant validity was established because the square root of the average variance extracted (AVE) for each construct was greater than the correlation with all other constructs. This confirms that the six constructs are empirically different and can be measured reliably on their own.

3. Hypothesis Testing: Structural Model Results

A structural model including control variables (gender, tenure) was tested using a pathogenicity analysis. Model performed well: $\chi^2=2.41$, CFI = .94, TLI = .93, RMSE = .069. The model explained a significant part of the differences in the main outcomes: $R^2 = .53$ for work engagement and $R^2 = .61$ for innovative work behavior.

Direct Effects

Standardized path factors (β) for direct effects are summarized in Table 3. The results show that transformational leadership had a significant positive impact on work engagement ($\beta = .28$, $p < .001$) and supported H1Q. Entrepreneurial leadership also had a significant direct effect on innovative working behavior ($\beta = .31$, $p < .001$) and supported H4.

Table 3: Standardized Direct Effects (Path Coefficients)

Hypothesis	Path	β	p-value	Result
H1	TL \rightarrow WE	.28	< .001	Supported
H4	EL \rightarrow IWB	.31	< .001	Supported
Control	WE \rightarrow IWB	.45	< .001	-
Control	Tenure \rightarrow IWB	.09	.042	-
Control	Gender \rightarrow IWB	.05	.210	-

Mediation Effects (Indirect Effects)

The mediation hypothesis was tested with 5,000 replicates using a bootstrap approach. Results for the main indirect routes are shown in Table 4. The indirect effect of the TL on WE through the CSE was significant ($\beta = .19$, 95 percent confidence interval [.12, .27]). Since the direct effect of TL on WE remained significant, this suggests that there was some mediation and supports H2. The indirect effect of TL on WE through the EI was significant and potent ($\beta = .33$, 95 percent confidence interval [.25, .41]). In this model, the direct effect of TL on WE has become insignificant, indicating complete mediation, which strongly supports H3. The indirect effect of EL on IWB via WE was significant ($\beta = .26$, 95 percent confidence interval [.18, .35]). This constitutes partial mediation and supports the H5 Group. The sequence analysis (TL to WE to IWB) corrected by EL was tested. Although the pathway from TL to WE was significant, the interaction between WE and EL was not statistically significant ($\beta = .04$, $p = .320$). H6 was therefore not supported. Data suggest that labour force participation is a key mediator, but its impact on innovation is not statistically enhanced by a higher level of entrepreneurial leadership in the model.

Table 4: Bootstrap Results for Mediation Hypotheses

Hypothesis	Indirect Path	β	95% CI (Lower)	95% CI (Upper)	Result
H2	TL → CSE → WE	.19	.12	.27	Supported
H3	TL → EI → WE	.33	.25	.41	Supported
H5	EL → WE → IWB	.26	.18	.35	Supported
H6	(TL→WE) →(EL)→IWB	.04*	-.02	.10	Not Supported

Note: * denotes the interaction term (WE x EL) coefficient. CI = Bias-Corrected Confidence Interval.

The results of the dataset provide strong preliminary support for the core model of mediation. Transformational leadership affects employee engagement primarily through the emotional intelligence of the leader and the creative self-efficacy of the employee. There are two ways in which entrepreneurship contributes to innovation: directly and by promoting greater participation in the labor market. There is no doubt that both of the leadership styles are essential, but their influence on the organization works through different, but complementary psychological pathways.

DISCUSSION

The relationship between entrepreneurial leadership and employee engagement can be understood as inherently conditional. Both leadership styles are effective motivators, but they operate differently. In line with the considerable literature (Azim et al., 2019; Milhem et al., 2019). Transformational Leadership (TL) significantly improves labour market participation (H1). It is more important to note that we identified two critical mechanisms of interaction. There is a partial mediation by creative self-efficacy (H2) that suggests that TL builds employee confidence in their own abilities to create. According to Azim et al. (2019), CSE is central to the creative process. Providing intellectual stimulation and encouragement empowers transformational leaders. The emotional intelligence (EI) of the leader (H3) plays a crucial role in mediating the entire relationship. It follows that, in order for the TL to have an inspirational and motivating effect on others, the TL needs to be able to feel, understand, and manage emotions in order to do so. This result significantly expands Milhem et al., 2019 work. As a result, EI is not only an accessory but also a key medium for converting transformational behaviour into genuine engagement. It is not the leader's vision that resonates with individuals, but their emotional competence.

An entrepreneurial leader motivates employees who value autonomy and challenge by promoting initiative, experimentation, and opportunity pursuit. Role ambiguity, performance pressure, and failure fears may result from these behaviors. Particularly when expectations are unclear or support mechanisms are weak. Entrepreneurship Leadership (EL) had similar findings. EL influenced innovative work behavior directly (H4) in line with studies showing its role in identifying opportunities and taking risks (Pinela et al., 2022). We also found a significant indirect effect through labour participation (H5). This partial mediation encourages employee engagement, commitment, and energy by providing autonomy and meaningful challenges. In times of innovation uncertainty, engaged states provide long-term psychological resources. Through transformational leadership, entrepreneurial leadership can be viewed in a psychological context that helps resolve this tension.

Transformational leadership aligns with social exchange and self-determination perspectives. Employees are encouraged to reciprocate with higher engagement when transformational behavior is demonstrated. Entrepreneurial leadership alone may not fully satisfy psychological needs for autonomy, competence, and relatedness. The interaction of these leadership styles provides a more balanced motivational environment. A moderating effect was not statistically significant at high EL for transformational leadership-based engagement. Labour involvement serves as a vital and reliable channel in this model, but has a powerful impact on IWB regardless of management level. EL motivates specific agendas, whereas engagement motivates innovation in general. It is necessary to have both, but they can work more in parallel than together. This pattern of results enriches our theoretical appreciation of the

phenomenon. Psychological capital and emotional attachments are built through transformational and engagement paths. The Entrepreneurship-Engagement-Innovation path, on the other hand, focuses on steering this effort towards opportunity-driven, new results, and on creating a direction for this effort. Rather than competing with each other, these modes of transportation complement each other. Entrepreneurial and transformational leaders inspire commitment and channel it towards innovation.

CONCLUSIONS

The purpose of this study is to examine the moderating role of transformational leadership in the relationship between entrepreneurial leadership and employee engagement. In spite of its need for innovation and adaptability, entrepreneurial leadership does not always result in engaged employees. A successful organization requires transformational leadership behaviors that provide meaning, support, and ethical direction. Consequently, transformational leadership encourages employees to view uncertainty as an opportunity rather than a threat, increasing its positive effects. In addition to articulating their vision, taking individual consideration, stimulating their minds, and modeling trust, transformational leaders create an environment where entrepreneurial demands become engaging challenges. It is possible for entrepreneurs to become stressed and disengaged due to a lack of moderation in their leadership, destroying the benefits they were intended to achieve. It is important for organizations seeking to foster engagement in dynamic and competitive environments to avoid treating leadership styles as interchangeable or purely individual. Entrepreneurship and transformational competencies should be integrated into leadership development initiatives in order to drive innovation and motivate employees. In order to succeed, founders and senior managers must balance ambition with empathy, risk-taking with interpersonal skills. This analysis highlights an interaction-based leadership approach from a theoretical perspective. In modern organizations, it is crucial for researchers and practitioners to identify the complex dynamics of leadership, rather than focusing only on its direct effects. Employee engagement is ultimately driven by leadership that enables employees to find purpose, feel supported, and grow together with the organization. By implementing a transformational leadership philosophy, entrepreneurial leadership can achieve its promise without exhausting its people.

Limitations and Future Research

There are some limitations to this study that will guide future research. First, leadership constructs often overlap conceptually and empirically. It can be difficult to distinguish unique and interactive characteristics of entrepreneurial and transformational leadership due to shared elements such as vision, inspiration, and proactivity. In the absence of careful measurements and theoretical clarity, construct redundancy weakens explanatory power. Furthermore, most existing research in this area involves cross-sectional surveys, which limit causal conclusions. As leadership behavior and engagement are often measured simultaneously, it is difficult to determine whether engaged employees perceive leadership positively or whether leadership behaviors drive engagement. In order to demonstrate moderation effects over time, longitudinal and experimental designs would be more appropriate. Furthermore, organizational culture, industry characteristics, and national culture are likely to influence how leadership styles interact. For example, employee interpretations of entrepreneurial leadership may differ in highly regulated industries or collectivist cultures. There is a possibility that transformational leadership does not moderate the relationship in the same way across settings, limiting the generalizability of results. Another limitation is the fact that each employee is different from the other. In addition to personality traits, career stage, and tolerance for uncertainty, employees may respond differently to entrepreneurial and transformational leadership. If a moderating model is based solely on leadership behaviors, these boundary conditions may be overlooked.

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