

# MANAGER'S LEADERSHIP STYLE EFFECT ON MANAGEMENT INNOVATION, PRODUCT INNOVATION, AND CORPORATE SUSTAINABILITY PRACTICES

**Bassem Emile Maamari<sup>1\*</sup>**

<sup>1</sup> Department of Management Information Systems and Marketing, Prince Mohammad Bin Fahd University

\*Corresponding author: [bmaamari@pmu.edu.sa](mailto:bmaamari@pmu.edu.sa)

*Article type: Original Research*

*Received: 18 September 2025 | Accepted: 16 December 2025 | Published online: 12 March 2026*

## Abstract

The aim of this study is to investigate the manager's leadership style and its effect on management innovation, product innovation, and corporate sustainability practices. For this purpose, a quantitative study using a structured questionnaire with a targeted sampling process was conducted in Saudi Arabia with 272 participants. The regression analysis results clearly highlight the belief among senior employees and managers in Saudi Arabia, that both transformational and transactional leadership affect management innovation, product innovation and corporate sustainability practices implementation in firms. However, against most of the published research results in the domain, transactional leadership is believed by managers to have a much higher effect than does transformational leadership in an environment where massive change is enforced by governmental authorities using a clear and ambitious strategy at the core, with clear strategic goals of management innovation, product innovation and corporate sustainability practices implementation in firms. This, on the professional level, implies a revised talent management process for hiring and promotion, in addition to preparing managers for the tasks ahead through training and development, as these different leadership styles require different skills, mindsets, and work attitudes. On the social level, this pushes the boundaries of organizational behaviour science toward investigating a new direction, namely, leadership behaviour in highly volatile work environments.

**Keywords:** *Management Innovation; Product Innovation; Corporate Sustainability Practices; Leadership Style; Transformational Leadership; Transactional Leadership; Saudi Arabia.*

## 1. Introduction

The role of managers is to lead organizations toward the best performance, through decision-making and performing various managerial functions required on the job (Maamari & Saheb, 2018). This performance of jobs and routines is affected by several factors, including the manager's personality (Robbins & Judge, 2024), ability to gain acceptance among the subordinates and peers, and aptitude in managing different people in the team (Maamari & Chaanine, 2013). The team may include members with diverse backgrounds, cultural, racial, educational, social and others, who perceive this attitude differently (Northouse, 2013), and respond and cooperate with the leader accordingly.

Management and product innovative corporations are reported to have specific characteristics, including resource availability, efficient decision-making, agility and resilience, reflecting organizational behaviours that support innovation. These behaviours support both management innovation and product innovation (Vaccaro et al. 2012; Chen et al. 2014). Moreover, efficient management of a firm unique resources makes the difference between success and failure as per the Resource-Based View framework. The scarcity of research on managers' preferred leadership style relationship with management and product

innovation, and corporate sustainability practices in a globalized open market, require deeper understanding of the market and its modus operandi, in order to remain competitive, thus the importance of this study at this time.

The aim of this study is to investigate the leadership style of managers in Saudi Arabia. This study is important in the wake of Saudi Arabia's economic high velocity development, with a national vision (Vision 2030), and an attempt to develop a parallel economy away from hydrocarbon (oil & gas). Innovation in this context, in both management and products, and corporate sustainability management, can play a major role in influencing the attainment of the set goals. With globalization and ongoing business and governmental discussions, corporations are seeking to strategically position themselves for market leadership. The quest of Saudi firms that are cash-rich and seeking global investments, among all global firms, requires a level of readiness. Thus, our research question is: Does leadership style affect product and management innovation, and corporate sustainability practices? The following will lay the foundation of the study in the extant literature, followed by a description of the methods and tools used in the study, then the results, discussion and conclusions.

## **2. Literature Review**

A wide body of research reports various inconclusive evidence on the role, importance and effect of leadership style on firm performance, with a lack of consensus. The effect of the manager's preferred leadership style on the firm's choices of corporate sustainability is a part of the fervent discussion today. Moreover, the drive and direction of innovative practices in firms is reported to include two components, namely management innovation and product innovation. Due to the important effect of these factors on the global competitiveness of firms, they need further scrutiny.

### **2.1 Manager's Leadership Style and Firms' Corporate Sustainability Practices**

In recent years, leadership, organizational culture and knowledge-sharing initiatives have strongly contributed to shaping the quest for corporate sustainability. Such components interact with and complement each other, becoming a system which allows sustainable initiatives to succeed. Several scholarly studies have investigated the relationship between a manager's leadership style and the respective firm's corporate sustainability performance.

First, Hossain et al. (2022) tested a foundational framework composed of nine proposed hypotheses, evaluating the role of corporate culture and leadership styles in knowledge management and connection to sustainability achievements. They observed that organizations with resilient, cohesive cultures are especially good at driving the flow of knowledge, hence promoting innovation and driving employee involvement. Transformational leadership is reported as a priority variable that links culture to sustainable outputs. They also emphasized that social capital, defined by the presence of trust, networks, and shared norms, is an important factor for which collective coordination for sustainability is required.

Second, Wang and Huang (2022) researched mechanisms through which culture affects corporate sustainability performance to highlight the connection between leadership and organizational culture. They provide a key discovery about what is sometimes an overlooked distinction that a cultural quality differs from firm to firm. On one side, flexible culture together with transformational leadership encourages both innovation and sustainability. On the other hand, a high controlling culture tends to stifle such results, and in conjunction with transactional leadership can actually use them to bewilder such objectives. These results shed light on the reasons for contradictory research outputs and show how leadership can be adjusted to suit organizational norms and values. For dynamic or technology-driven SMEs, especially, attaining this alignment is key to sustaining their resilience and agility over time.

While Wang and Huang (2022) focus on internal culture, Shahzad et al. (2022) highlight that corporate sustainability plays a strategic role in mediating organizational dynamics. Their analysis shows that transformational leadership influences people, strategy, sphere of culture, and the ability of the organization to adapt to external challenges. Once leaders make sustainability a main tenant, they enable its mass application in the operations, supply chains, and decision-making. Importantly, they indicate that knowledge-sharing through encouragement of knowledge-sharing serves as a critical moderator that aligns the dots of transformational leadership and sustainable performance, strengthening organizational innovation, supporting sustainability efforts, and promoting overall competitiveness. It concludes that sustainable practices are not purely a product of a leader's hands, but rather, a product of how knowledge and cultural baselines are mobilized within the firm, extending the role of leadership on sustainability beyond top management.

Moreover, gender diversity of boards takes an important consideration in the way organizations speak and act regarding their sustainability goals. The study of Pareek et al. (2023) reports that women executives' new perspectives on stakeholders' interests enhance moral choices. Maamari and Doumet (2022) highlight the importance of a large, diversified board with diverse experience and perspective, bringing more effective and responsive management. Surprisingly, the research reveals that bigger firms and more profitable organizations are more likely to report more about sustainability, while such qualities as independence of the board or frequency of service meetings have a minimal effect. These results confirm the notion that a varied ethical leadership represented at all levels of the organization greatly promotes corporate sustainability.

Furthermore, Afzal and Tumpa (2024) explored the impact of leadership in construction projects on sustainability measures, which is notorious for complexities and heavy environmental imprint. After examining the findings of 31 publications, the authors concluded that transformational leadership drives green innovations and brings more sustainable operations. Moreover, their research reports the need to improve leadership capabilities over time. In the wake of sustainability demands, modern leaders need learning ability both in terms of strategic foresight and plasticity of behaviour beyond what has conventionally been expected of project managers. According to the authors, this change of heart points to a dramatic change of paradigm regarding both the understanding and practice

of leadership; one that tries to weigh and balance environmental and social priorities with the traditional financial goals.

Finally, Suieubayeva et al. (2025) infer the importance of green transformational leadership (GTL) represented as a decisive factor that links the company's strategy to sustainability, by nurturing the values of the environment and fostering green cultures in the company. Such leaders promote innovation, reorient human resource processes toward sustainability, and significantly affect stakeholders from staff to vendors, and from investors to legislative decision-makers. In economies with nascent regulatory systems, GTL is essential for guaranteeing sustainability integration through normal business activities. Other suggestions are to overhaul how leaders are hired, trained and assessed, encouraging shifts in educational proposals focused on sustainability.

A further comprehensive review of these studies shows a key understanding that sustainability is intrinsically linked to the way an organization is led, how knowledge is established and shared, and how diverse and responsive its culture is. Change leadership, regardless of its shape, is commonly sought out as the factor that enables this ecosystem operability. Leading by such initiatives as those that strengthen confidence, nurture innovative thoughts, and bring diversity into decisions, or by matching strategies with environmental goals, leadership becomes crucial to sustainable long-term. Therefore, we propose our first hypothesis:

*H<sub>1</sub>: Manager's leadership style affects the firm's corporate sustainability practices.*

## **2.2 Manager's Leadership Style and Firm's Innovation Practices**

Firm innovation practices include two main components, namely product innovation (Chen et al. 2014) and management innovation (Vaccaro et al. 2012; Jisr et al. 2022). In fact, a large group of research strongly correlates leadership and the development of innovation to long-term competitive success, particularly in industries with constant change. This point is supported by Burton and Dickinge (2025), who believe that the effectiveness of dynamic capabilities (DC), made up of an organization's ability to sense, seize, and transform opportunities, is decisive. Their results show that when hospitality businesses use transformational and empowering leadership, they create a positive influence on all aspects of DC, becoming significant driving forces of innovation, while participative leadership demonstrates a fuzzy impact. Moreover, firms with high DC tend to be more innovative, whereas their leadership effectiveness varies depending on the firm's stage of innovation.

Moreover, and in alignment with this viewpoint, Alheet et al. (2021) studied the innovation of employees in a university setting, indicating that a high level of employee engagement in innovation-related activities is reliably increased by the transformational leadership. Those leaders who exhibit respect and other signs of dignity, recognize achievements and promote cooperative spirit, let employees interact and address issues concerning their work. However, workers demonstrated that transactional and laissez-faire leadership brought negative results, as the former concerned the standard procedure maintenance and not the promotion of creativity, and the latter made the workers feel

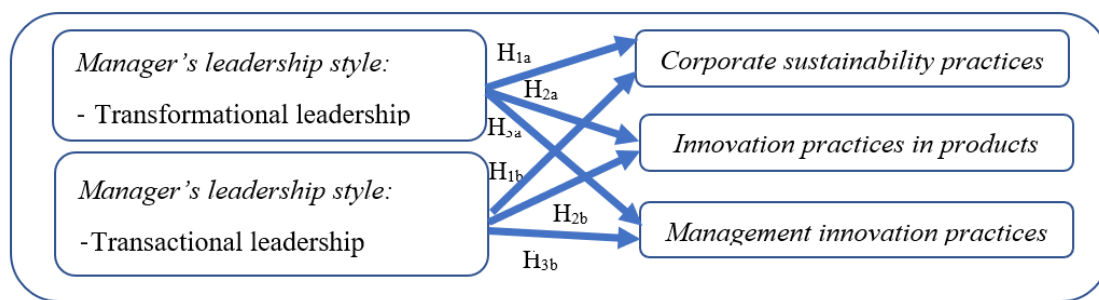
demotivated and not interested. Although employees were eager to deal with existing challenges, the absence of leadership motivation disfavoured advanced idea generation and initiative, which solidified how important leadership style is in developing a culture of innovation within the corporation.

The advent of digital leadership makes the dynamic between innovation and leadership even more complicated, particularly in the digital transformation environment. Al-Nuaimi et al. (2021) described four fundamental elements that digital leadership applies for promoting sustainable innovation. The impact of visionary leaders goes further to incorporate applying technological evolution synchronizing with environmental goals, as well as developing organizational frameworks for both cooperation and sustainability. There are firms that create an environment of knowledge-sharing in which their staff can significantly contribute to environmental initiatives, thus simplifying the transition to the digital transformation (Jisr & Maamari, 2014). Building on the above findings, Hussein et al. (2024) explore how digital leadership enhances sustainable competitive advantage in tourism and hospitality via green absorptive capacity and eco-innovation (product innovation). Digital leaders, according to the study, promote flexible adaptation and the creation of an environment that fosters continuous learning and innovation.

By engaging in such behaviours, firms not only indirectly but also directly build proficiency in environmental knowledge application, green training programs' launching, and eco-innovative strategy use. This reflects positively on organizations because it allows them to build stronger supply networks, better credibility to constituents, and effective linkage with sustainable development interests. By demonstrating how green absorptive capacity and eco-innovation can mediate, the research emphasizes the importance of how leaders act and how structures are organized in order to achieve leadership success, highlighting the sum total of digital leadership's impact. Despite the abundant research in the field, limited studies have investigated the three factors at hand, and none have attempted to study the Saudi Arabian model. This model attempts to fill a gap in the extant literature. First, it incorporates three independent systems into the leadership style research, and second, it studies the effect of leadership style in an environment characterized by condensed high transformation following a national strategy to diversify the economy, This model has 2 distinct features, first it is fast developing, and second, it is-driven by public intent and strategic plans heavily funded by the government (Vision 2030). Therefore, we are proposing the following two hypotheses and model to test (Figure 1):

*H<sub>2</sub>: Manager's leadership style affects the firm's innovation practices in products.*

*H<sub>3</sub>: Manager's leadership style affects the firm's management innovation practices.*



**Figure 1. Model to test (Authors' own work)**

### 3. Methodology

To analyse the relationship of the study at hand, the researchers followed the steps described by Saunders et al.'s (2008) 'research onion'. Therefore, the authors relied on the positivist philosophy, a deductive approach, and used a survey strategy in a cross-sectional time-horizon for their data collection and analysis technique. The survey tool used is a questionnaire built in six parts. The first part includes an introduction to the study, informed consent, and seven questions aimed at capturing the demographic characteristics of the respondents, namely, gender, age, education and tenure. The second part on transformational leadership, and the third on transactional leadership, each consists of 4 questions based on the MLQ scale developed by Bass & Avolio (1990). The fourth part is composed of a 37-item scale items on corporate sustainability innovation borrowed from El-Khalil and El-Kassar (2018) and Jisr et al. (2022). The fifth on product innovation practices, three items, borrowed from Chen et al. (2014). The last is composed of five scale items on management innovation practices borrowed from Vaccaro et al. (2012). All five parts (206) are measured on a 5-likert scale, where 1=strongly disagree and 5=strongly agree.

For collecting the data, the researchers contacted all the listed firms operating in three industrial regions in Saudi Arabia, inviting them to take part in the study. The list was taken from the 'Factories and Establishments Directory' issued by the 'Saudi Authority for Industrial Cities and Technology Zones' and includes 404 firms in 3 industrial cities. Every fifth firm listed was sampled, with a total of 81 firms invited to participate. The Human Resource department of these were contacted by phone and invited to take part. An electronic link was sent for ease of use and was shared with 2,100 employees and managers. The received complete 272 responses were anonymously collected via Google Forms from various levels of management, with a response rate of 12.95%. The data was cleaned and coded, then transferred to SPSS v.26.0 for data analysis, beginning with reliability and factor analysis, then descriptive analysis, correlations and linear regression analysis. Cronbach's Alpha ranges between 0.793 and 0.965 (see Table 1), which are deemed acceptable. Moreover, the Kaiser-Meyer-Olkin Measure of sampling adequacy ranges between 0.700 and 0.801, with a statistical significance of 0.000 for all. Thus, it is concluded that the collected data is adequate for further analysis.

**Table 1: Scale Reliability tests**

Variable		N	Cronbach Alpha	KMO	Chi <sup>2</sup>	Sig.
<b>TfL</b>	Transformational Leadership	4	0.890	0.793	683.478	0.000
<b>TsL</b>	Transactional Leadership	4	0.793	0.762	327.545	0.000
<b>CSP</b>	Corporate Sustainability Practices	37	0.965	0.787	10597.384	0.000
<b>PI</b>	Product Innovation	5	0.824	0.801	563.588	0.000
<b>MI</b>	Management Innovation	3	0.814	0.700	284.743	0.000

#### 4. Results

The first step in analysing the collected data was to review the descriptive statistics of the collected data (Table 2). Moreover, the data of the respondents was analysed for a better understanding of their details. These are summarized in Table 3. The majority of the respondents (81%) are males, owing to the study being done on firms operating in industrial zones in KSA, a conservative community where limited numbers of female employees were traditionally employed until recently. The majority of the respondents are supervisors or managers (91.17%), with extended years of tenure in the firm, 43.38% have more than 6 years, 22.05% more than 10 years, and 32.35% more than 15 years of service in the firm. These have undoubtedly seen changes in management along their tenured years of service.

**Table 2: Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
<b>Gender</b>	272	1.00	2.00	1.1912	0.39395
<b>Age</b>	272	1.00	6.00	3.4559	1.70464
<b>Educ Level</b>	272	1.00	6.00	3.2941	1.15332
<b>Study Major</b>	272	1.00	6.00	2.5294	1.55082
<b>Job Rank</b>	272	1.00	3.00	2.2647	1.41132
<b>Tenure</b>	272	1.00	4.00	2.8455	1.16832
<b>Work Experience</b>	272	1.00	4.00	2.9264	1.18465

**Table 3: Demographic Details of the Respondents**

	N	1	2	3	4	5	6
<b>Gender</b>	27	Male	Female				
	2	220	52				
<b>Age</b>	27	<20	21-30	31-40	41-50	51-60	60<
	2	32	68	56	32	28	56
<b>Educ. Level</b>	27	< High School	High School	Bachelor	Professional	Master	Doctorate
	2	8	48	140	20	44	12
<b>Study Major</b>	27	Business	Computer	Engineering	Social Stud.	Art/Literature	Other
	2	100	40	80	12	20	20
<b>Job Rank</b>	27	Employee	Supervisor	Management			
	2	24	152	96			
<b>Tenure in firm</b>	27	5< years	6-10 years	11-15 years	15< years		
	2	6	118	60	88		
<b>Work Experience</b>	27	5< years	6-10 years	11-15 years	15< years		
	2	8	108	52	104		

The researchers ran a two-tailed correlation analysis, including the demographic variables and the five constructs of the study (Table 4). The results show that inter-correlation between the different variables is moderate to high, ranging from 0.486 to 0.761, with significance of 0.000 at  $p < 0.01$ . From the results we conclude that management innovation is more correlated (higher) with transactional leadership ( $R^2=0.759$ , Sig.=0.000;  $p < 0.01$ ) than with transformational leadership ( $R^2=0.486$ , Sig.=0.000;  $p < 0.01$ ); product innovation is more correlated with transactional leadership ( $R^2=0.716$ , Sig.=0.000;  $p < 0.01$ ) and management innovation practices ( $R^2=0.699$ , Sig.=0.000;  $p < 0.01$ ) than with transformational leadership ( $R^2=0.570$ , Sig.=0.000;  $p < 0.01$ ). Finally, corporate sustainability practices are more correlated with transactional leadership ( $R^2=0.636$ , Sig.=0.000;  $p < 0.01$ ) and management innovation practices ( $R^2=0.570$ , Sig.=0.000;  $p < 0.01$ ) than with transformational leadership ( $R^2=0.541$ , Sig.=0.000;  $p < 0.01$ ), yet it is correlated the most with product innovation ( $R^2=0.761$ , Sig.=0.000;  $p < 0.01$ ).

**Table 4: Correlation Results**

<b>Corr \ Sig.</b>	<b>TfL</b>	<b>TsL</b>	<b>MI</b>	<b>PI</b>	<b>CSP</b>
<b>TfL</b>		0.000	0.000	0.000	0.000
<b>TsL</b>	0.734**		0.000	0.000	0.000
<b>MI</b>	0.486**	0.759**		0.000	0.000
<b>PI</b>	0.570**	0.716**	0.699**		0.000
<b>CSP</b>	0.541**	0.636**	0.570**	0.761**	

The results of the linear regression analysis are summarized Table 5. These show that transformational leadership explains more variability of management innovation, product innovation and corporate sustainability practices than does transactional leadership.

**Table 5: Linear Regression Results**

<b>Independent Var.</b>	<b>Dependent Var.</b>	<b>R<sup>2</sup></b>	<b>SE</b>	<b>Sig.</b>	<b>β</b>	<b>Coeff. SE</b>
<b>TfL</b>	<b>MI</b>	0.236	2.20299	0.000	0.314	0.034
<b>TfL</b>	<b>PI</b>	0.325	2.81834	0.000	0.501	0.044
<b>TfL</b>	<b>SCP</b>	0.292	20.66461	0.000	3.403	0.322
<b>TsL</b>	<b>MI</b>	0.576	1.64170	0.000	0.632	0.033
<b>TsL</b>	<b>PI</b>	0.512	2.39643	0.000	0.811	0.048
<b>TsL</b>	<b>SCP</b>	0.404	18.95689	0.000	5.158	0.381

## 5. Discussion

To answer the research question at hand, whether leadership style affects product innovation, management innovation, and corporate sustainability practices in firms, the researchers reviewed the extant literature. The gap underpinned relates to the shortage of studies on the three variables at hand, in the context of the current highly competitive market framework at the global stage. This shortage in combination with the Resource-Based View that stresses the importance of the unique resource combination(s) of entities, drives competitive advantage. With the progress toward accomplishing the Vision 2030 of the Saudi government, the Saudi economy is moving away from its past reliance on the hydrocarbon economy, building on its unique resources deployed for this purpose. These resources are meant to push for innovation in management and product, while also building a culture of sustainability. The study results clearly show that for driving product innovation and management innovation, the Saudi economy should rely more on managers with a transactional leadership general attitude rather than a transformational. These transactional

leaders are better equipped to drive sustainability practices. These results are in contradiction to what Hossain et al. (2022), Shahzad et al. (2022), Wang and Huang (2022), Afzal and Tumpa (2024), and Suiubayeva et al. (2025) report. Moreover, the study results show that product innovation and management innovation require transactional leadership for better implementation. This is in contrast with the results of Chen et al. (2014), Al-Nuaimi et al. (2021), Alheet et al. (2021), and Burton and Dickinge (2025).

These results highlight two streams. First, they highlight the pressure placed through governmental channels on firms through both investors and managers alike, to align with the official country's vision (Vision 2030), and incorporate the needed changes and innovative practices in management and products, along with corporate sustainability practices, in response to governmental targets and their accomplishment. Second, these results showcase the stress placed on managers in corporate entities to comply, forcing them to adopt behaviours that do not necessarily align with their beliefs (as previous studies show), but are more of emergency coping mechanisms to streamline government-initiated/required changes with firm corporate goals and targets.

This study has helped us better understand how managers behave in an environment of high volatility in terms of change, especially when the change is initiated by the government authorities. The study results open a small window toward different academic implications, whereby leadership style under pressure may need to be adaptable or flexible following circumstances enforced by regulatory rather than board needs and guidelines. The scenario under study, being quite peculiar in a capitalistic monarchy economy, requires further analysis as to leadership behaviour, and whether these leaders may change behaviour outside these prerogatives. Studies on organizational behaviour, motivation and job satisfaction (Maamari & Chaanine, 2013), employee psychology, and performance management generally report that transformational leadership produces better results (Maamari & Saheb, 2018). Despite the wide scope of expected outcomes, the study results show a different direction that requires deeper investigation, as transactional leadership in such a business environment is stealing the show.

## 5.1 Implications

Professionally, the study results mean that management and especially talent management units need to take into consideration the long-term effect of this managerial behaviour of leaders on job satisfaction and motivation, and thereby on tenure and recruitment potential. Moreover, the processes for recruitment and hiring need to be revisited, as firms need to manage talent for global competitiveness. Should they hire transactional or transformational leaders? Managers who indulge in transactional leadership behaviour for extended periods of time may need re-skilling or risk affecting firm performance (Jisr et al. 2022). This implies that raising the question of (re)skilling while firms generally accept the scientific evidence from the organizational behaviour field reporting the need for transformational leaders at the operational levels, requires preparing a different set of values, skills, attitudes and behaviours for specific times or economic conditions. The issues emanating from board of directors'

goals misalignment, or gender comparative issues, are not yet measured due to the novelty of their introduction to the workplace. These may well require employee readiness as the country gears up for global competitiveness in different sectors traditionally led by established economies in the East and the West. Therefore, professional analysis of personality and training provision should be catered for as the speed of innovation in product and management subsides, and as the firms stabilize their application and compliance with corporate sustainability guidelines.

## **5.2 Limitations**

The study at hand took into consideration a number of factors, resulting in limiting the scope. The scope, time and budget did not allow for analysing the differences between industry sectors. Moreover, due to the limited number of responses, the researchers were not able to compare the differences resulting from the respondents' educational backgrounds. Finally, for anonymity and ease of data collection, the question pertaining to respondent nationality was eliminated to facilitate responses to the questionnaire in data collection. This could also be an important factor affecting the study's limitations, as the Saudi industries are shifting from global to nationalized hiring.

## **5.3 Future Research Direction**

It is important that future research focuses on the diversity and inclusion issues that will unfold as workplace equality is applied more widely, and as gender diversity and promotions of females to managerial positions take place. The current localization of many jobs is already being affected through the replacement of foreign experienced employees and managers by locals, whose leadership style may differ due to culture, personal drive and motivation, imitation of world leaders, or even loyalty to family and tribe. All of these require thorough meta-analysis and comparison of data.

## **5.4 Conclusion**

The aim of this study is to investigate the manager's leadership style and its effect on management innovation, product innovation, and corporate sustainability practices. The quantitative study results with 272 participants helped us understand the needed leadership style for operating in a high volatility environment. The preferred style as per the participating respondents from different industrial sectors, shows that transactional leadership produces better results in management innovation, product innovation and corporate sustainability practices implemented in firms. This opens the door to revisiting the general managerial understanding that gives preference to transformational leadership.

## **Ethical Clearance**

The authors received the ethical clearance from the university committee concerned on Dec. 7, 2024, number RCCOBA/PMU/24/298.

## AI Declaration

Generative Artificial Intelligence was not used in the process of conducting this research or writing the paper.

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