

## INTERNATIONAL JOURNAL OF ORGANIZATIONAL LEADERSHIP

WWW.CIKD.CA

journal homepage: <https://www.ijol.cikd.ca>



# Sustainable Development: The Colours of Sustainable Leadership in Entrepreneurial Ventures

Muhammad Bilal Shaukat<sup>1\*</sup>, Waqar Alam<sup>2</sup>

<sup>1,2</sup>Department of Management Sciences, Abasyn University Peshawar, Pakistan

### Keywords:

*Sustainable leadership,  
Absorptive capacity, Sustainable  
project management,  
Sustainable performance*

### Received

17 October 2023

### Received in revised form

02 December 2023

### Accepted

08 December 2023

### \*Correspondence:

[m.ibbikh19@gmail.com](mailto:m.ibbikh19@gmail.com)

### ABSTRACT

By applying the concepts from Resource Based View (RBV) and Knowledge-Based View (KBV), this endeavor aims to determine the influence of Sustainable Leadership (SusL) on Sustainable Performance (SusP). The study further ascertains the mediating role of Absorptive Capacity (AbsC) and Sustainable Project Management (SuPM) in this relationship. We utilized Partial Least Squares - Structural Equation Modeling to substantiate the direct and mediating effects on the data gathered from employees working in Small and Medium-sized Enterprises (SMEs) firms. The result indicated that SusL significantly impacts SusP while AbsC and SuPM mediate this relationship. This research stands out for its originality in two important aspects. First, it takes a multidisciplinary approach by drawing RBV and KBV, enriching the study's theoretical foundations. Second, it delves into the mediating roles of AbsC and SuPM, providing a deeper understanding of how SusL influences SusP. In a nutshell, this research's originality lies in its multidisciplinary approach, nuanced exploration of mediating factors, SME focus, and empirical validation, making it a valuable contribution to the study of sustainable leadership and performance in contemporary business settings.

©CIKD Publishing

Firms traditionally evaluate their performance by considering factors such as equity, debt, and their position in the marketplace (Siddiqui & Iqbal et al., 2023). However, in today's business environment, stakeholders are exerting pressure on firms to incorporate social, economic, and ecological aspects into their decision-making and strategies (Shaukat et al., 2022). The increasing competitive pressures and growing public apprehension about sustainability underscore the need for firms to take a leadership role in sustainability (Moehler et al., 2018). The conventional leadership styles that were suitable for earlier business models are now

inadequate to fulfill the demands of modern firms (Mabey et al., 2012). Therefore, it is imperative to discuss leadership behaviors from the perspective of sustainable leadership (*hereafter referred to as SusL*) (Su et al., 2020). SusL entails long-term decision-making, promoting systemic innovation to nurture a skilled and loyal workforce, and prioritizing the delivery of high-quality products with a focus on increasing overall value-addition. SusL possesses the capacity to yield a positive impact on a diverse set of firm performance indicators (Aung & Hallinger, 2023; Iqbal & Piwovar-Sulej, 2023). Despite the growing significance of SusL in the field of business management, the understanding of SusL practices for sustainable performance (*hereafter referred to as SusP*) is still relatively emerging. Scholars like Assoratgoon and Kantabutra (2023) argued that our knowledge of sustainability-productive culture is limited. Iqbal et al. (2020b) call for future research on the linkage between SusL and SusP. Baird et al. (2023) argued that the extant research has primarily focused on accessing the impact of a SusL style on specific firm outcomes. However, a notable research gap exists to explore the effect of SusL on alternative firm outcomes such as sustainable firm performance. They further recommended that future endeavors should aim to bridge this gap by exploring the yet unexplored effects of SusL on a wider range of firms' consequences. In light of the increasing importance of global commitment to Sustainable Development Goals (SDGs), Siddiqui and Shaukat et al. (2023) argued that SusL is becoming increasingly prominent in business settings. They further recommended that SusL's role should be explored in subsequent research to gauge the firm's sustainability.

The existing body of literature has raised questions regarding the practical approach taken in the investigation of the direct relationship between SusL and SusP in numerous studies (Iqbal, Ahmad, Nasim, & Khan, 2020; Iqbal Ahmad & Li, 2021). They contend that the outcomes, whether significant, non-significant, or impartial, obtained from investigations into the direct connection between SusL and SusP have displayed a notable uniformity. This is attributed to the potential influence of various other mediating variables, which a considerable number of studies have overlooked. Considering this, our study integrates absorptive capacity (*hereafter referred to as AbsC*) and sustainable project management (*hereafter referred to as SuPM*) as mediating variables, forming a connecting link between the relationship of SusL and SusP.

The existing body of literature has identified several gaps related to the roles of SusL, AbsC, SuPM, and SusP that require attention. First, while SusL concerns are on the rise, the practical implementation of SusL practices remains considerably underdeveloped (Shamim et al., 2019). Particularly, project management professionals have yet to fully integrate SusL initiatives into the management of their firms' sustainable performance (Shaukat et al., 2022). Scholars like Piwovar-Sulej and Iqbal (2023) emphasized the need to investigate the correlation between SusL and SusP. Second, the direct linkage between SusL and SusP may benefit from the inclusion of a mediating mechanism (Hu et al., 2023). Prior research called for the exploration of absorptive capacity and sustainable project management as potential mediator variables (e.g., Dubois & Silvius, 2020; Rezaei Zadeh et al., 2020). Third, the often-omitted mediating role of AbsC in the existing body of literature requires attention. Ferreras Méndez et al. (2018) highlighted the significance of leadership practices in enhancing the understanding of AbsC for firm effectiveness. Besides, Rezaei Zadeh et al. (2020) suggested that future studies should

delve into sustainable leader attributes and their influence on AbsC for achieving sustainable performance.

Fourth, SuPM represents a novel perspective in business management. Shaukat et al. (2022) argued that SuPM positively contributes to project performance and firm effectiveness. They further asserted that SusL practices serve as a driving force for the successful implementation of SuPM principles. Dubois and Silvius (2020) recommended that the inclusion of SuPM in future research models offers an intriguing avenue for assessing sustainability. Finally, in developing economies, Small and Medium-sized Enterprise (SME) manufacturing firms hold a pivotal role in striving to achieve Sustainable Development Goals (SDGs). They contribute by generating employment opportunities, ameliorating poverty levels, fostering innovation, nurturing sustainable businesses, and reducing income disparities (Iqbal, & Piwovar-Sulej, 2023; Littlewood & Holt, 2018). Nevertheless, Iqbal, Ahmad, and Ahmad (2021) have underscored the scarcity of research examining sustainable performance in the SME context and the pressing need to address sustainability within SMEs. Consequently, this study is designed to gather data from SME sectors operating in Pakistan (Iqbal & Piwovar-Sulej, 2023). Our research inquiries are structured as follows:

RQ1: To what extent does SusL significantly impact SusP?

RQ2: Do AbsC and SuPM mediate the relationship between SusL and SusP?

This endeavor makes a significant contribution to both theory and the existing literature. At first, we incorporate concepts from the Resource-Based View (RBV) and Knowledge-Based View (KBV) to enrich the theoretical foundations of the research. By drawing on these diverse knowledge streams, the study offers a holistic perspective for understanding the dynamics of SusL and its impact on sustainable performance. This integration of different fields enhances the overall understanding of SusL impact. Second, one of the key distinguished features of this study is its focus on mediating variables. While many studies have examined direct relationships, this study delves deeper by investigating the mediating roles of Absorptive Capacity (AbsC) and Sustainable Project Management (SuPM). This nuanced exploration sheds light on how SusL influences SusP through these intermediary factors and provides a broader view of the underlying mechanisms. This in-depth analysis contributes positively to the existing body of knowledge and enhances our understanding of the multifaceted interactions in the realm of SusL. Third, we validate SuPM and SusP as a second-order construct. This innovative approach offers a more comprehensive and unified method for evaluating sustainability practices in project management. Fourth, this endeavor's distinctive feature lies in its specific focus on Small and Medium Enterprises (SMEs), making it a noteworthy aspect of the research. SMEs are a vital element of developing economies, and the sector-specific insights of the intended research are highly relevant. By addressing the unique challenges and opportunities faced by SMEs in SusL and performance contexts, this study provides valuable insights and practical guidance for this essential sector. Fifth, this study not only contributes theoretically but also adds practical value through real-world validation. By using empirical evidence gathered from SME employees, it reinforces the credibility and applicability of the findings. This alignment of theory with practical relevance makes it a valuable resource for practitioners and decision-makers. Finally, the novelty of this research lies in its multidisciplinary approach, consideration of mediating factors, specific focus on SMEs, and the incorporation of empirical

validation. Together, these elements make it a substantial and valuable contribution to the study of SusL and performance in contemporary business settings.

## **Literature Review**

### **Sustainable Leadership**

The term SusL is interchangeably used in the literature such as sustainability leadership, green management, environmental leadership, and honeybee leadership, to explore the connection between leadership and sustainable outcomes (Cosby, 2014; Iqbal, Ahmad, Nasim, & Khan, 2020). SusL places a strong emphasis on enhancing the well-being of stakeholders while simultaneously ensuring the present and future perspective of the firm (McCann & Holt, 2010). SusL stimulates the fundamental value of sustainability across individual, firm, and societal levels (Pearse & Dimovski, 2015). Moreover, SusL prioritizes capacity building, sustainable transformation, and long-term benefits, thereby looking beyond short-term gains to make substantial contributions toward achieving Sustainable Development Goals (SDGs) (Hallinger & Suriyankietkaew, 2018). The adoption of SusL practices, including valuing employees, fostering a shared vision, emphasizing social concern, and maintaining positive employee relationships, has a profound impact on driving enduring sustainable performance (Suriyankietkaew & Avery, 2016).

### **Sustainable Leadership and Sustainable Performance**

The extant literature highlighted the influence of SusL on SusP. For instance, Moehler et al. (2018) posited that to pursue stakeholder expectations and sustainable performance; firms must yield SusL practices that deliver outcomes with superior social, economic, and environmental effects. Avery and Bergsteiner (2010) argued that a SusL is a fundamental element in producing quality products that contribute to higher firm performance. SusL practices shape organizational culture, improve employee performance, and redefine structure to achieve sustainable outcomes (Ferdig, 2007).

This study utilizes Barney's (1991) Resource Based View (RBV) to analyze the impact of SusL on SusP. RBV stated that a firm has a set of distinct resources to achieve strategic objectives and become the basis of firm effectiveness (Barney, 1991). Firms employ leadership as human capital resources being knowledgeable, non-replaceable, and unique (Harris & McMahan, 2015). Based on RBV, Iqbal and Ahmad (2021) believed that SusL practices are distinctive, growing, advanced, valuable, and non-substitutable and that they can help a firm gain a competitive edge over other market entrants. Firms with improved SusL practices will have a higher capacity to achieve sustainable advantages (Pearse & Dimovski, 2015). Based on these theoretical underpinnings, this study employs SusL, which is considered an important form of leadership in the age of sustainability.

**H1:** *Sustainable leadership has a positive impact on sustainable performance.*

### **Mediating Role of Absorptive Capacity**

Cohen and Levinthal (1990) coined the term Absorption Capacity (AbsC), which encompasses the firm aptitude to ascertain the importance of novel knowledge, transform it, and use it for viable purposes. AbsC has been considered an important resource for transforming knowledge wealth within the organization. Rezaei-Zadeh and Darwish (2016) argued that a leader is a

critical and facilitating resource to encourage AbsC practices including knowledge exploration, integration, transformation, and implementation. In addition, SusL creates and preserves sustainable learning, reinforces ecological diversification, and actively engages with eco-settings to realize AbsC learning processes that improve a firm's effectiveness (Rezaei Zadeh et al., 2020).

The extant literature highlighted that AbsC positively mediated the relationship between leadership styles and firms' performance. For instance, Shafique and Kalyar (2018) translated the significant mediating role of AbsC in connection with transformational leadership style and SME entrepreneurship. Rahomee and Kumar (2014) found that AbsC positively intervened between firm managerial support factors and technological innovation. Rezaei Zadeh et al. (2020) highlighted that transformational and transactional leadership styles influenced the AbsC learning processes, which in turn support sustainable effectiveness.

The mediating role of AbsC between the relationship of SusL and SusP can be reaped from Grant's (1996) Knowledge-Based View (KBV), which states that the key reason for the existence of firms is the exploration, integration, and exploitation of knowledge. Proficiently managing and applying knowledge and intellect is the way to superior firm performance (Zack et al., 2009). AbsC is the firm strategic asset and become a key source of sustainability by bringing and transforming external novel knowledge within the firm (Li et al., 2018). SusL serves as a driving force for AbsC initiatives and enables it to form an indirect connection with SusP. Hence, based on Grant's (1996) KBV theory, this study argued that SusL helps improve the firm knowledge of AbsC, which ultimately augments sustainable performance. Based on these lines of logic, the study proposed that:

**H2:** *Absorptive capacity mediates the relationship between SusL and SusP.*

### **Mediating Role of Sustainable Project Management**

SuPM involves planning and monitoring project processes while considering environmental, economic, and social concerns over the project life cycle to benefit stakeholders while ensuring transparency and proactive stakeholder participation (Silvius & Schipper, 2014). Zulkiffli and Latiffi (2016) provided a theoretical review of SusL in construction and other industrial projects and found that SusL takes the responsibility to implement social, environmental, and economic sustainable project management practices. Moreover, SusL is capable of managing SuPM practices more efficiently and effectively (Shaukat et al., 2022).

The extant literature highlighted that SuPM positively mediated the relationship between SusL and SusP. For instance, Goedknecht (2013) stated that leaders have "a lot of" influence on the implementation of SuPM practices. Similarly, Ullah et al. (2020, p.2) argued that successful adaptation and implementation of SuPM can be achieved by utilization of "project manager's abilities and leadership qualities" which in turn significantly enhance performance-based outcomes. Silvius and Schipper (2020) stated that SuPM implementation involved systematic and balanced arrangements between different perspectives on development and performance. They further argued that the leader has a 'central and influential position to gauge sustainability'.

The mediating role of SuPM between the relationship of SusL and SusP can be explained from Barney's (1991) Resource-Based View (RBV), which states that firms have a group of

distinct resources that assist as the foundation of the firm's strategic management and the prime source of success. Likewise, the core of RBV centers on organizations that intend to contest one another through vibrant assets and capabilities (Ayuso & Navarrete-Báez, 2018). Drawing from RBV, it is asserted that the growing and irreplaceable nature of SuPM implementation capabilities positions a firm to gain a competitive edge over others (Larsson & Larsson, 2020). SuPM has been considered a distinct resource of the firms to support and complete project life cycle stages efficiently (Silvius & Schipper, 2014). Firms with improved SuPM implementation knowledge will have superior capabilities compared to those that practice SPM in a fragmented (or ad hoc) way (Larsson & Larsson, 2020). Based on RBV (Barney, 1991), the present study argued that SusL helps improve SuPM practices that ultimately augment sustainable performance. Based on these arguments, the study proposed that:

**H3:** *Sustainable project management mediates the relationship between SusL and SusP.*

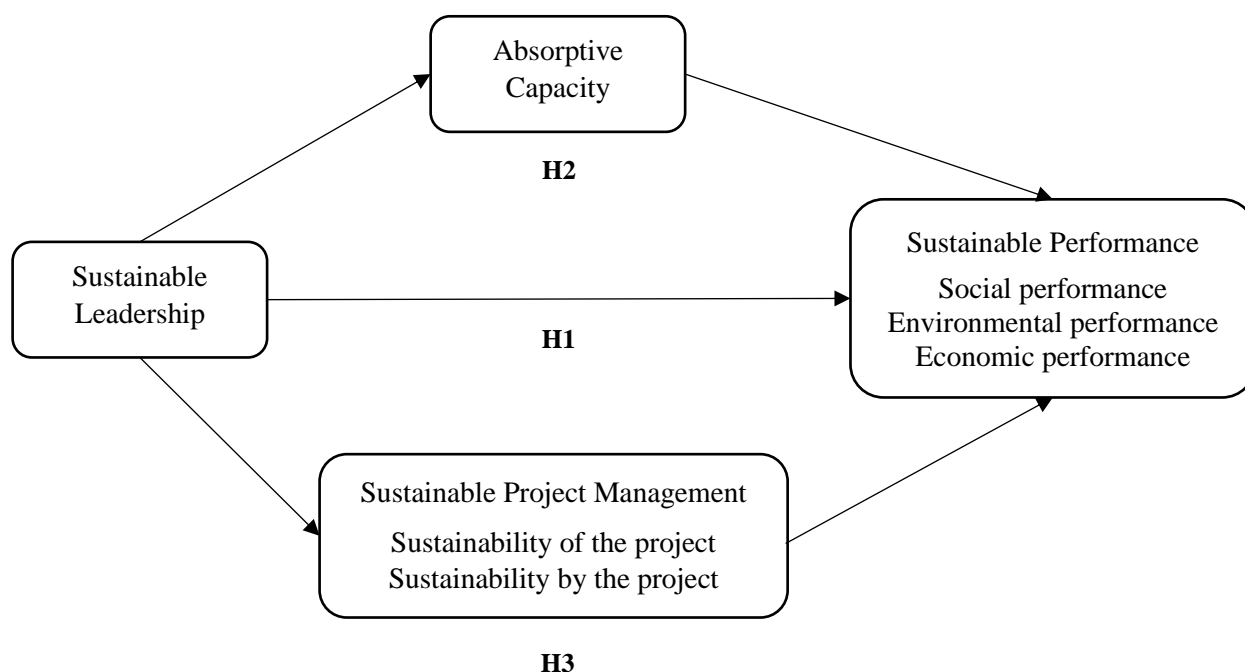
From a theoretical standpoint, we draw upon the principles outlined in the RBV and KBV theories to ascertain the relationship between SusL, AbsC, SuPM, and SusP. The RBV theory, as outlined by Barney (1991), emphasizes that a firm performance relies on its unique set of resources and capabilities. The RBV is a theoretical lens that underscores the significance of firms' internal resources and capabilities as a fundamental driver for sustainable outcomes. Within the context of our study, RBV served as a foundation by emphasizing how strategies and practices, when considered valuable and unique resources, can significantly contribute to the overall sustainability performance of a firm. It likely explored how the distinctive attributes of SusL including decision-making, long-term vision, and sustainability in project management and fostering an innovative and inclusive culture, contribute to the efficient utilization of firm resources that enhance sustainable performance over time. In our study, SusL and SuPM are considered valuable resources. SusL brings distinct knowledge, skills, and a decision-making approach that serves as a unique asset for firm effectiveness. Based on RBV guidelines, our research is designed to delve into the role of SusL as a distinctive organizational resource, and we explore its impact on strengthening the competitive position of SME firms in the marketplace. Likewise, SuPM practices enable a firm to gauge sustainability and improve performance. Whereas, SusL enables SuPM initiatives to form an indirect link with SusP.

Our research also draws upon KBV, as Grant (1996) proposed, to delve into the mediating role of AbsC in the relationship between SusL and SusP. KBV emphasizes the key role of knowledge assets, intellectual capital, and organizational learning processes to achieve a competitive edge and sustainability. In this study, we utilized KBV to investigate how SusL, through its emphasis on continuous learning, knowledge acquisition, and dissemination, and foster a culture of learning, contributes to creating and disseminating knowledge assets within a firm. This approach likely examined how knowledge-centric initiatives and practices such as promoted by SusL, have a positive impact on firm SusP. According to KBV, firms primarily exist to acquire and exploit knowledge for their operations and advancement. AbsC evolved into a vital force for sustainability as it acquires and transforms external knowledge while SusL enables AbsC initiatives to form an indirect association with SusP. This study aimed to enable firms to adapt to dynamic environments, stimulate knowledge acquisition, and effectively harness their intellectual capital in a sustainable manner. The integration of RBV and KBV theories enhances our theoretical framework, supporting a more holistic understanding of the

relationship between SusL and SusP within the SME context. This study provides an in-depth exploration of the underlying mechanisms and pathways through which SusL practices contribute firm SusP. The research model of the study is presented in [Figure 1](#).

**Figure 1**

*Research Model*



## Method

### **Sample and Procedure**

The data were collected from firms registered with the Small and Medium Enterprises Development Authority (SMEDA) of Pakistan. The SME products include textiles, leather, footwear, sports, food and beverages, and different equipment used in daily routines. The mainstream survey respondents were from Punjab, a highly developed province of Pakistan (Zafar & Mustafa, 2017).

In the present motivation, a quantitative, cross-sectional methodology was employed using a survey questionnaire-based approach. Quantitative research usually involves several research methodologies, with survey and experimental research being among the most common (Creswell, 2009). In this particular research, a survey-based research methodology was chosen as it enables standardized data collection to describe constructs and investigate the proposed relationships among them (Malhotra & Grover, 1998). The research design is correlational and seeks to assess the influence of SusL on SusP, with a focus on the mediating mechanism of AbsC and SuPM. This research engaged Pakistan's SME firms as data sources to support further analysis and the generalization of findings. A convenience sampling technique was employed to gather data from participants efficiently. This approach is especially beneficial when practical considerations, including accessibility and efficiency, are paramount in the data collection.

The survey instrument was designed to capture the major constructs including SusL, AbsC, SuPM, and SusP. Multi-item scales were adopted from the extant literature to measure the

constructs. A total of 650 questionnaires were distributed to the employees working in SMEs firms through a personal network. We also visited them and distributed questionnaires to fill out. Potential respondents were assured that participation was entirely voluntary. The data gathered from SMEs consisted of 394 responses, out of which 16 were not included due to missing entries. Three hundred seventy-eight (378) questionnaires were included for further analysis. Participants in the current study were requested to provide demographic information. The demographic details of the respondents are presented in [Table 1](#).

**Table 1**

*Demographics Profiling of Respondents*

Factor		No of participants	%age
Gender	Male	289	76.5
	Female	89	23.5
	Total	378	100
Age	20 – 29	143	37.8
	30 – 39	158	41.8
	40 – 49	49	12.9
	50 and above	28	7.5
	Total	378	100
Education	Inter	32	8.4
	Undergraduate	193	51.2
	Graduate	144	38.1
	Doctorate	9	2.3
	Total	378	100
Experience	1-5 years	97	25.6
	6-10 years	170	44.9
	11 and above	111	29.3
	Total	378	100

### **Instrumentation and Measures**

The validated scale was adopted from the literature to measure study variables. A five-point Likert rating scale was used with anchors from “strongly agree” to “strongly disagree”.

*Sustainable leadership.* The scale of SusL is adopted from (McCann & Holt, 2010), which consists of 15 items.

*Sustainable performance.* The scale of SusP is adopted from (Khan & Quaddus, 2015), which consists of 15 items.

*Absorptive capacity.* The scale of AbsC was adopted from (Zacharia et al., 2011). A total of 7 items made up the AbsC questions.

*Sustainable project management.* The scale of SuPM is adopted from (Dubois & Silvius, 2020). 3-items were adopted for management of the project and 3-items were considered management by the project. A total of 6 items made up the scale.

### **Measuring SuPM and SusP as Second-order Constructs**

The extant literature highlighted various studies in the field of sustainable corporate practices, particularly in manufacturing firms that traditionally treated sustainability as a construct comprising multiple individual sub-dimensions. For instance, Dubois and Silvius (2020) adopted a holistic approach to measure SuPM with two sub-constructs, namely, sustainability of the project and sustainability by the project. Similarly, Ullah et al. (2020) measured SuPM practices by validating SuPM as a second-order construct with three sub-dimensions. In addition, Masocha and Fatoki (2018) assessed the sustainability performance of manufacturing firms by assessing three individual constructs rather than a single higher-order construct.



Moreover, a study conducted by Iqbal et al. (2020a) assessed SusP by considering specific sub-dimensions, which include economic sustainability, social sustainability, and environmental sustainability.

In the existing body of literature, an increasing number of studies recommended the utilization of higher-order constructs owing to several advantages, such as higher-order constructs reducing the complexity of path model relationships, thereby enhancing model parsimony (Ringle et al., 2020). In addition, forming higher-order constructs reduces issues related to collinearity between formative indicators through the reconfiguration of specific indicators and constructs across different concrete sub-dimensions of the overarching abstract construct (Hair et al., 2017). Generally, in the corporate sector, sustainable practices are considered under the overarching term "sustainability," often referred to as the triple bottom line concept as a theoretical foundation. Recent studies also discussed sustainability in the context of project management (Iqbal et al., 2020b; Ullah et al., 2020). Therefore, the establishment of a second-order measurement scale from these studies can serve as a valid and reliable source for measuring SuPM and SusP. In light of the discussion above, we adopted the second-order construct approach to measure SuPM and SusP with support from the extant literature, particularly drawing from the work of Dubois and Silvius (2020) and Iqbal et al. (2020b). SuPM is further divided into two sub-dimensions: sustainability of the project and sustainability by the project. Similarly, SusP is further divided into three sub-dimensions: economic performance, social performance, and environmental performance. The prime objective of this endeavor is to validate SuPM and SusP as second-order constructs in Pakistani SME firms, utilizing the innovative PLS-SEM technique through Smart PLS-4.

## Results

We employed Partial Least Square - square-structural equation modeling by using Smart PLS-4. PLS-SEM is a contemporary method for analyzing quantitative data in social sciences research. PLS-SEM consists of a two-stage analysis, which includes 1) measurement model specification and 2) structural model assessment (Figure 2 and Figure 3).

### Measurement Model

We assessed the measurement model to ascertain the reliability and validity of the constructs. This assessment further included the examination of loadings, alpha, composite reliability, convergent, and discriminant validity. Acceptable loadings are generally considered to be  $> .50$  (Gefen & Straub, 2005), the composite reliability of a construct is  $.70$  (Ringle et al., 2020), and for alpha, it is  $.70$  (Nunnally, 1978). Table 2 illustrates that all variables well established data reliability. We assessed convergent validity through Average Variance Extracted (AVE), with a cutoff value of  $.50$ , which was met (Ringle et al., 2020).

**Table 2**  
Factor-loading, Data Reliability, and Validity

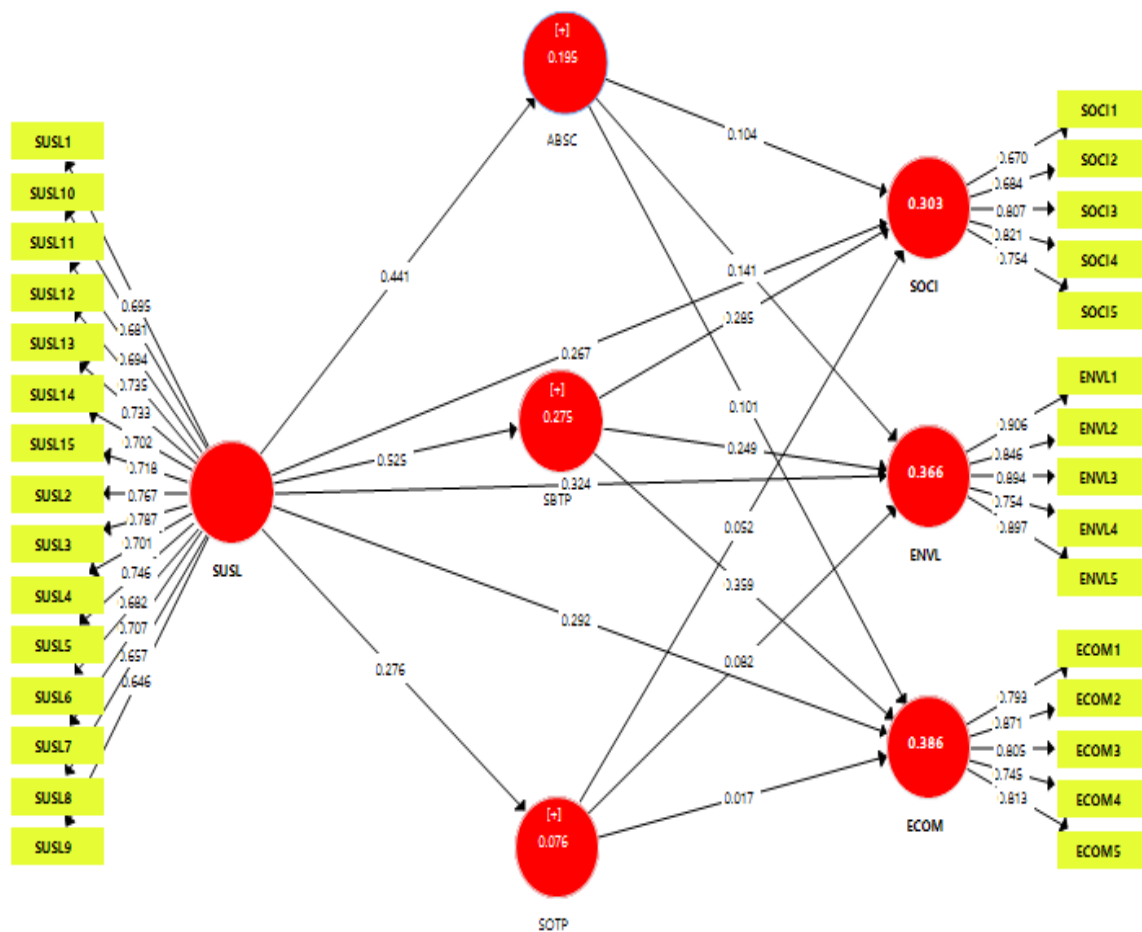
Variables	Items	Loadings	Alpha	CR	AVE
Sustainable leadership	SUSL1	.69	.93	.93	.50
	SUSL2	.76			
	SUSL3	.78			
	SUSL4	.70			
	SUSL5	.74			
	SUSL6	.68			
	SUSL7	.70			
	SUSL8	.65			
	SUSL9	.64			
	SUSL10	.68			
	SUSL11	.69			
	SUSL12	.73			
	SUSL13	.73			
	SUSL14	.70			
	SUSL15	.71			
Social performance	SOCI1	.67	.80	.86	.56
	SOCI2	.68			
	SOCI3	.80			
	SOCI4	.82			
	SOCI5	.75			
Environmental performance	ENVL1	.90	.91	.93	.74
	ENVL2	.84			
	ENVL3	.89			
	ENVL4	.75			
	ENVL5	.89			
Economic performance	ECOM1	.79	.86	.90	.65
	ECOM2	.87			
	ECOM3	.80			
	ECOM4	.74			
	ECOM5	.81			
Absorptive capacity	ABCP1	.78	.88	.91	.67
	ABCP2	.85			
	ABCP3	.83			
	ABCP4	.84			
	ABCP5	.77			
Sustainability by the project	SBTP1	.87	.85	.91	.77
	SBTP2	.88			
	SBTP3	.88			
Sustainability of the project	SOTP1	.90	.89	.93	.82
	SOTP2	.91			
	SOTP3	.90			

We analyzed discriminant validity through the HTMT ratio, with a cutoff value of  $< .90$  (Henseler et al., 2015). Table 3 illustrates that the findings established the convergent validity concern.

**Table 3**  
Heterotrait-Monotrait Ratio

	ABCP	ECOM	ENVL	SBTP	SOCI	SOTP	SUSL
ABCP							
ECOM	.35						
ENVL	.39	.61					
SBTP	.28	.63	.52				
SOCI	.34	.89	.55	.53			
SOTP	.30	.22	.28	.23	.24		
SUSL	.46	.58	.58	.58	.53	.30	

**Figure 2**  
Measurement Model



**Structural Model**

We assessed the structural model through the guidelines outlined by Hair et al. (2017). In doing so, we evaluate the coefficient of determination ( $R^2$ ) and the predictive relevance measure ( $Q^2$ ).  $R^2$  is estimated for endogenous latent variables to determine the amount of variance elucidated by all constructs (Hair et al., 2017).  $Q^2$  indicator is used to assess the model’s overall relevance (Stone, 1974). The values of  $Q^2$  must be greater than or equal to zero. The  $R^2$  and  $Q^2$  values of latent variables are presented in Table 4, which reflects that our model holds predictive accuracy and relevance.

**Table 4**  
Coefficient of Determination and Predictive Relevance Measure

Variables	$R^2$	$Q^2$
ABSC	.19	.12
ECOM	.38	
ENVL	.36	.33
SBTP	.27	
SOCI	.30	.17
SOTP	.07	

### Hypotheses Testing

The structural model illustrates the path relationship between the constructs of the study. H1 evaluates whether SusL has a substantial impact on SusP. The results revealed that SusL positively impacts SusP ( $\beta = .35, t = 6.02, p < .000$ ), thus H1 supported. We assessed mediation analysis using two mediator variables (a) absorptive capacity and (b) sustainable project management between the relationship of SusL and SusP. H2 evaluates whether AbsC mediates the relationship between SusL and SusP. The result indicated that the indirect effect of SusL on SusP through AbsC was found to be substantial (H2:  $\beta = .05, t = 2.40, p < .016$ ). The total effect of SusL on SusP was substantial ( $\beta = .61, t = 16.41, p < .000$ ). With the inclusion of the mediator AbsC, the influence of SusL on SusP was still substantial ( $\beta = .35, t = 6.02, p < .000$ ). H3 evaluates whether SuPM mediates the relationship between SusL and SusP. The result indicated that the indirect effect of SusL on SusP through SuPM was found to be substantial (H3:  $\beta = .20, t = 5.15, p < .000$ ). The total effect of SusL on SusP was substantial ( $\beta = .61, t = 16.41, p < .000$ ). With the inclusion of the mediator SuPM, the influence of SusL on SusP was still substantial ( $\beta = .35, t = 6.02, p < .000$ ). This reflected complementary partial mediation, therefore, H2 and H3 supported. The results are presented in Table 5 and Table 6.

**Table 5**

*Hypotheses Result - Direct Impact*

	$\beta$	<i>SD</i>	<i>t</i>	<i>p</i>
H1: SusL→SusP	0.35	0.05	6.02	0.000

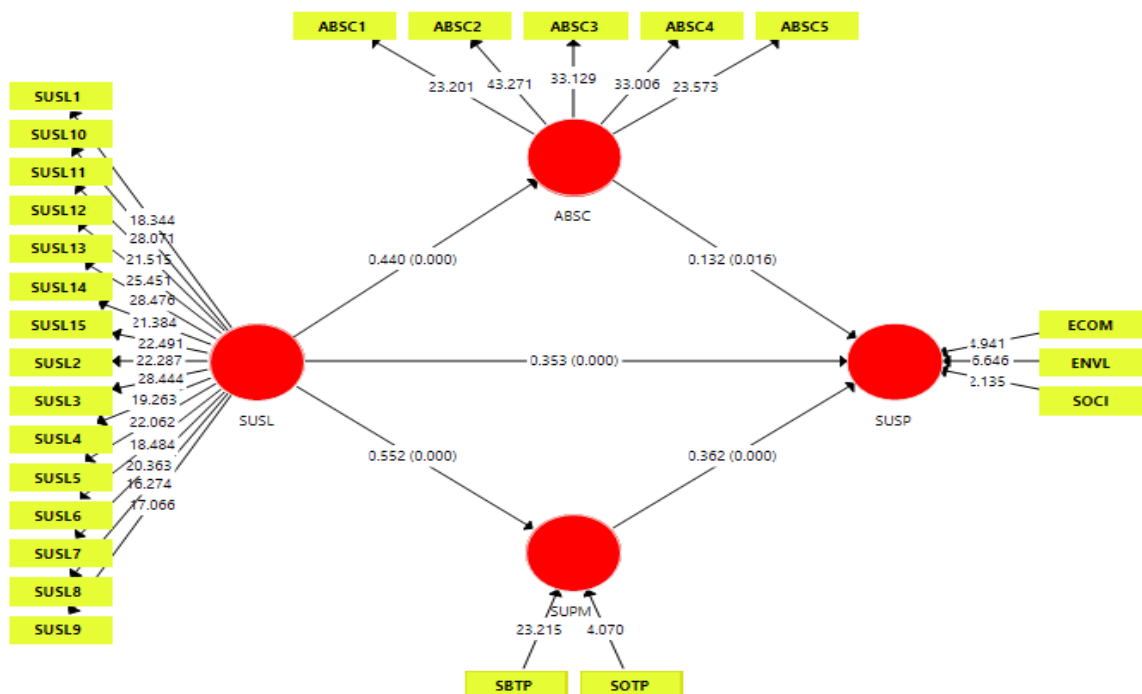
**Table 6**

*Hypotheses Result - Mediating Impact*

Total Effect (SusL→SusP)			Direct Effect (SusL→SusP)			Indirect Effect (SusL→SusP)		
Coefficient	<i>t</i>	<i>p</i>	Coefficient	<i>t</i>	<i>p</i>	Coefficient	<i>t</i>	<i>p</i>
0.61	16.41	0.000	0.35	6.02	0.000	SusL→AbsC→SusP	2.40	0.016
						SusL→SuPM→SusP	5.15	0.000

**Figure 3**

*Structural Model*



## Discussion

This study set out to investigate the research question of how SusL affects SuP. A research framework was developed from Resource-Based View (RBV) and Knowledge-Based View (KBV) to establish the relationship between the study's constructs. This study underscores SusL as a dynamic and multifaceted approach that provides manifold advantages in achieving sustainable outcomes. It validates how SusL serves as a catalyst to foster SusP, creativity, sustainability, knowledge, intellect, and overall organizational progress. This cumulative evidence supports the pivotal role of SusL in achieving sustainable success within the context of SMEs.

The study found a positive impact of SusL on SusP. The results are consistent with the discoveries of the past literature. For instance, Iqbal et al. (2020a) examined a linkage between SusL and SusP and found that SusL serves as a buffering agent to enhance SusP. Gerard et al. (2017) argued that SusL practices should be embedded to enhance creativity and goal accomplishment and improve the future of the firm. Consequently, the results of this study comply with the research work of Pearse and Dimovski (2015), whereby they stated that those organizations that have a higher level of SusL practices will have a higher capacity to achieve sustainable performance. Likewise, Piwowar-Sulej and Iqbal (2023) conducted a comprehensive systematic literature review to examine the relationship between different leadership styles and their influence on sustainable performance. Their findings revealed that, among various leadership styles, the transformational leader and sustainable leader were widely employed to enhance SusP. Hence, it is concluded that SusL is a vibrant approach that encompasses several benefits to accomplish sustainable outcomes.

This study found a significant mediating role of AbsC in the relationship between SusL and SusP. The outcomes established this hypothesized relationship. The current result aligned with the findings of the extant investigation, which support and witness the significant mediating role of AbsC. For instance, Naqshbandi (2016) confirmed that AbsC serves as a pivotal link between managerial connections and the sustainable performance of a firm. Shafique and Kalyar (2018) elucidated the substantial mediating function of AbsC in the context of SME entrepreneurship and its correlation with leadership style. Moreover, Ferreras Méndez et al. (2018) highlighted the significance of leadership practices in understanding AbsC for enhancing overall firm effectiveness. They found that leadership emerges as a key factor that contributes significantly to a firm's AbsC, enhancing sustainability. Rezaei Zadeh et al. (2020) found that leadership styles influence AbsC learning processes, contributing to sustainable effectiveness.

This study found a significant mediating role of SuPM in the relationship between SusL and SusP. The outcomes established this hypothesized relationship. The current result aligned with the findings of the extant investigation, which support and witness the significant mediating role of SuPM. For instance, Ullah et al. (2020) emphasized the pivotal role of a project manager's skills and leadership attributes in effectively driving the adoption and execution of SuPM practices. This, in turn, leads to significant enhancements in assessing a firm's sustainability performance. Similarly, Silvius and Schipper (2020) argued that the implementation of SuPM demands well-structured and coordinated arrangements that consider various dimensions of development and performance. They further underscored that SuPM acts as the critical link, empowering leaders to occupy a central and influential position in the

promotion of sustainable performance of the firm. Moreover, Dubois and Silvius (2020) posited that leadership wields substantial influence in the implementation of SuPM practices, which act as the mediating framework that integrates economic, social, and environmental factors to facilitate the attainment of sustainable outcomes. Siddiqui and Iqbal et al. (2023) proposed that SuPM acts as a mediator in the correlation between SuPM and SusP. In a similar vein, Shaukat et al. (2022) emphasized that SusL significantly affects both SuPM and SusP, asserting its pivotal role in managing sustainable project practices for enhanced efficiency and effectiveness.

## **Conclusion**

This research highlights key concepts, which include SusL, AbsC and SuPM. These concepts have been proven to significantly lift the sustainability of company performance. This study is one of the initial efforts to establish the proposed framework connecting SusL with SusP with the mediation of AbsC and SuPM. The results showed that SusL directly influences the sustainability of SME firms' performance, while AbsC and SuPM act as contributing mediators in this relationship. Broadly, the core finding of this endeavor is that SusL wields a substantial impact over the firms' SusP. This impact operates through both direct and indirect paths, with AbsC and SuPM serving as essential mediators. This underscores the multifaceted impact of SusL on driving sustainability outcomes in SMEs, emphasizing the significance of integrating SusL practices within these firms to improve overall performance and contribute to broader sustainability objectives.

## **Research Implications**

From a theoretical perspective, this research makes significant contributions to the domains of Resource-Based View (RBV) and Knowledge-Based View (KBV). It delves into the intricate connections between SusL and its impact on AbsC, SuPM, and SusP in the context of Small and Medium-sized Enterprises. Underscoring the pivotal role of SusL expands our comprehension of leadership dynamics in technology-driven environments. The empirical evidence underscores that SusL, characterized by its focus on knowledge integration and the implementation of sustainable practices, plays a key role in developing highly skilled and committed employees, delivering higher-quality outcomes, and securing the future of the firm. This not only enriches existing leadership theories but also demonstrates that leadership styles geared toward sustainability can profoundly impact firm effectiveness. Furthermore, our research sheds light on the mediating role of AbsC and SuPM, unraveling the complex relationships between SusL and SusP. This nuanced understanding contributes to the broader body of knowledge on leadership practices for sustainable outcomes.

From a practical standpoint, our research carries significant implications for SME firms. It equips project leaders and managers within these firms with a deeper understanding of the attributes of AbsC and SuPM. These insights elucidate the pivotal roles played by these factors in shaping the link between SusL and SusP. This study offers a roadmap for practitioners in SME firms to comprehend how their leadership style can influence overall firm effectiveness. By grasping the role of SusL, project managers can refine their strategies, enhance their decision-making practices, and ultimately contribute to the productivity and success of their firms. Furthermore, human resource departments can leverage this research to fine-tune their recruitment and leadership selection processes. They can identify and nurture leaders exhibiting

SusL traits, recognizing their potential to make a significant impact on sustainable performance within the unique context of SMEs. In essence, this research serves as a practical guide for SMEs, offering actionable insights to heighten both their managerial decision-making and overall organizational effectiveness in the pursuit of sustainability.

### **Limitation and Future Motivation**

This study is grounded in a cross-sectional approach, and future studies should prioritize conducting longitudinal research to unveil the evolving behavior of sustainable leadership and its impact on sustainable performance over time. Second, the data collected pertains to the SME context. Subsequent research should aim to replicate the study model across diverse sectors. This will enable the assessment of variations among sectors within both the developing and developed world. Third, in our efforts to identify the underlying mechanisms, we employed AbsC and SuPM. Future studies should cogitate the inclusion of additional facilitating factors. Green innovation, recognized as a significant aspect of sustainable leadership, should be incorporated as a potential mediator in the same model, fostering a consensus in this area. Finally, based on our findings, we contend that SusL is a dynamic force encompassing multiple attributes to advance broader sustainability goals. This insight opens avenues for upcoming research in this realm.

### **Declarations**

#### **Acknowledgements**

Not applicable.

#### **Disclosure Statement**

No potential conflict of interest was reported by the authors.

#### **Ethics Approval**

Not applicable.

#### **Funding Acknowledgements**

Not applicable.

### **Citation to this article**

Shaukat, M. B., & Alam, W. (2023). Sustainable development: The colours of sustainable leadership in entrepreneurial ventures. *International Journal of Organizational Leadership*, 12(First Special Issue), 202-219. <https://doi.org/10.33844/ijol.2023.60391>

### **Rights and Permissions**



© 2022 Canadian Institute for Knowledge Development. All rights reserved.

International Journal of Organizational Leadership is published by the Canadian Institute for Knowledge Development (CIKD). This is an open-access article under the terms of the [Creative Commons Attribution \(CC BY\) License](#), which permits use, distribution, and reproduction in any medium, provided the original work is properly cited.

## References

- Aung, P. N., & Hallinger, P. (2023). Research on sustainability leadership in higher education: A scoping review. *International Journal of Sustainability in Higher Education*, 24(3), 517–534.
- Avery, G. C., & Bergsteiner, H. (2010). *Honeybees & locusts: The business case for sustainable leadership*. Allen & Unwin.
- Assoratgoon, W., & Kantabutra, S. (2023). Toward a sustainability organizational culture model. *Journal of Cleaner Production*, 136666.
- Ayuso, S., & Navarrete-Báez, F. E. (2018). How does entrepreneurial and international orientation influence SMEs' commitment to sustainable development? Empirical evidence from Spain and Mexico. *Corporate Social Responsibility and Environmental Management*, 25(1), 80–94.
- Baird, K., Su, S., & Munir, R. (2023). The mediating role of levers of controls on the association between sustainable leadership and organisational resilience. *Journal of Management Control*, 34(2), 167–200.
- Barney, J. (1991). Firm resources and sustained competitive advantage. *Journal of Management*, 17(1), 99–120.
- Cohen, W., Levinthal, D. (1990). Absorptive capacity: a new perspective on learning, innovation. *Administrative Science Quarterly*, 35, 128–152.
- Cosby, D. (2014). Sustainability program leadership for human resource development professionals: A competency model. *Journal of Organizational Culture, Communications & Conflict*, 18(2), 79–86.
- Creswell, J. W. (2009). Mapping the field of mixed methods research. *Journal of Mixed Methods Research*, 3(2), 95–108.
- Dubois, O., & Silvius, G. (2020). The relation between sustainable project management and project success. *Relation*, 9(4), 218–238.
- Ferdig, M. A. (2007). Sustainability leadership: Co-creating a sustainable future. *Journal of Change Management*, 7(1), 25–35.
- Ferreras Méndez, J. L., Sanz Valle, R., & Alegre, J. (2018). Transformational leadership and absorptive capacity: an analysis of the organisational catalysts for this relationship. *Technology Analysis & Strategic Management*, 30(2), 211–226.
- Gefen, D., & Straub, D. (2005). A practical guide to factorial validity using PLS-Graph: Tutorial and annotated example. *Communications of the Association for Information systems*, 16(1), 5.
- Gerard, L., McMilan, J. and D'Annunzio-Green, N. (2017). Conceptualising Sustainable Leadership. *Industrial and Commercial Training*, 49(3), 116–126.
- Goedknecht, D. (2013, June). Responsibility for adhering to sustainability in project management. In *7th Nordic Conference on Construction Economics and Organization, Trondheim* (pp. 145-154).
- Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, 17(S2), 109–122.
- Hair, J. F. Jr, Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017). *A primer on partial least squares structural equation modeling (PLS-SEM)*, 2nd ed. SAGE Publications.
- Hallinger, P., & Suriyankietkaew, S. (2018). Science mapping of the knowledge base on sustainable leadership, 1990-2018. *Sustainability (Switzerland)*, 10(12), 1–22.
- Harris, C. M., & McMahan, G. C. (2015). The influence of compensation on leader human capital and unit performance. *SAM Advanced Management Journal*, 80(1), 33–40.
- Henseler, J., Ringle, C. M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135.
- Hu, L., Chang, T. W., Lee, Y. S., Yen, S. J., & Ting, C. W. (2023). How does sustainable leadership affect environmental innovation strategy adoption? The mediating role of environmental identity. *International Journal of Environmental Research and Public Health*, 20(1), 894.
- Iqbal, Q., & Ahmad, N. H. (2021). Sustainable development: The colors of sustainable leadership in learning organization. *Sustainable Development*, 29(1), 108–119.
- Iqbal, Q., Ahmad, N. H., & Ahmad, B. (2021). Enhancing sustainable performance through job characteristics via workplace spirituality: A study on SMEs. *Journal of Science and Technology Policy Management*, 12(3), 463–490.
- Iqbal, Q., Ahmad, N. H., & Halim, H. A. (2020a). How does sustainable leadership influence sustainable performance? Empirical evidence from selected ASEAN countries. *Sage Open*, 10(4), 2158244020969394.
- Iqbal, Q., Ahmad, N. H., & Halim, H. A. (2020b). Insights on entrepreneurial bricolage and frugal innovation for sustainable performance. *Business Strategy & Development*, 4(3), 237–245.
- Iqbal, Q., Ahmad, N. H., & Li, Y. (2021). Sustainable Leadership in Frontier Asia Region: Managerial Discretion and Environmental Innovation. *Sustainability*, 13(9), 5002.



- Iqbal, Q., Ahmad, N. H., Nasim, A., & Khan, S. A. R. (2020). A moderated-mediation analysis of psychological empowerment: Sustainable leadership and sustainable performance. *Journal of Cleaner Production*, 262, 121429.
- Iqbal, Q., & Piwowar-Sulej, K. (2023). Sustainable leadership and heterogeneous knowledge sharing: The model for frugal innovation. *European Journal of Innovation Management*, 26(7), 655–673
- Khan, E. A., & Quaddus, M. (2015). Development and validation of a scale for measuring sustainability factors of informal microenterprises – a qualitative and quantitative approach. *Entrepreneurship Research Journal*, 5(4), 347–372.
- Larsson, J., & Larsson, L. (2020). Integration, application and importance of collaboration in sustainable project management. *Sustainability*, 12(2), 585.
- Li, C., Sun, L. Y., & Dong, Y. (2018). Innovating via building absorptive capacity: Interactive effects of top management support of learning, employee learning orientation and decentralization structure. *Creativity and Innovation Management*, 27(4), 431–443.
- Littlewood, D., & Holt, D. (2018). How social enterprises can contribute to the Sustainable Development Goals (SDGs)—A conceptual framework. In *Entrepreneurship and the sustainable development goals*. Emerald Publishing Limited.
- Mabey, C., Kulich, C., & Lorenzi-Cioldi, F. (2012). Knowledge leadership in global scientific research. *The International Journal of Human Resource Management*, 23(12), 2450–2467.
- Malhotra, M. K., & Grover, V. (1998). An assessment of survey research in POM: from constructs to theory. *Journal of Operations Management*, 16(4), 407–425.
- Masocha, R., & Fatoki, O. (2018). The impact of coercive pressures on sustainability practices of small businesses in South Africa. *Sustainability*, 10(9), 3032.
- McCann, J. T., & Holt, R. A. (2010). Servant and sustainable leadership: an analysis in the manufacturing environment. *International Journal of Management Practice*, 4(2), 134–148.
- Moehler, R., Hope, A., & Algeo, C. (2018, August). Sustainable project management: revolution or evolution? In *Academy of Management Proceedings* (Vol. 2018, No. 1, p. 13583). Academy of Management.
- Naqshbandi, M. M. (2016). Managerial ties and open innovation: examining the role of absorptive capacity. *Management Decision*, 54(9), 2256–2276.
- Nunnally, J. C. (1978). *Psychometric theory*, 2d Ed. McGraw-Hill.
- Pearse, N., & Dimovski, V. (2015). Strategic decision making for organizational sustainability: The implications of servant leadership and sustainable leadership approaches. *Economic and Business Review*, 17(3), 273–290.
- Piwowar-Sulej, K., & Iqbal, Q. (2023). Leadership styles and sustainable performance: A systematic literature review. *Journal of Cleaner Production*, 382, 134600.
- Rahomee, A. Q., & Kumar, D. (2014). The mediating role of absorptive capacity in its effect on organizational support factors and technological innovation. *Information Management and Business Review*, 6(1), 25–41.
- Rezaei Zadeh, M., Haak-Saheem, W., Darwish, T. K., & Singh, S. (2020). The Impact of Leadership on Absorptive Capacity: New insights from the UAE. *Canadian Journal of Administrative Sciences*, July 2019, 1–11.
- Rezaei-Zadeh, M., & Darwish, T. K. (2016). Antecedents of absorptive capacity: A new model for developing learning processes. *The Learning Organization*, 23(1), 77–91.
- Ringle, C. M., Sarstedt, M., Mitchell, R., & Gudergan, S. P. (2020). Partial least squares structural equation modeling in HRM research. *The International Journal of Human Resource Management*, 31(12), 1617–1643.
- Shafique, I., & Kalyar, M. (2018). Linking transformational leadership, absorptive capacity, and corporate entrepreneurship. *Administrative Sciences*, 8(2), 9.
- Shamim, S., Cang, S., & Yu, H. (2019). Impact of knowledge oriented leadership on knowledge management behaviour through employee work attitudes. *The International Journal of Human Resource Management*, 30(16), 2387–2417.
- Shaukat, M. B., Latif, K. F., Sajjad, A., & Eweje, G. (2022). Revisiting the relationship between sustainable project management and project success: The moderating role of stakeholder engagement and team building. *Sustainable Development*, 30(1), 58–75.
- Siddiqui, A. W., Iqbal, S., Shaukat, M. B., & Latif, K. F. (2023). From coaching leadership style to construction industry project success: Modelling the mediating role of team building and goal clarity. *International Journal of Organizational Leadership*, 12(First Special Issue 2023), 142–164.
- Siddiqui, A. W., Shaukat, M. B., Fancy, W. M., & Latif, K. F. (2023). From Knowledge-Oriented Leadership to Information Technology Project Success: Modelling the Mediating Role of Team Empowerment. *International Journal of Organizational Leadership*, 12(Second Special Issue 2023), 91–312.
- Silvius, A. J. G., & Schipper, R. (2014). Sustainability in project management competencies: Analyzing the competence gap of project managers. *Journal of Human Resources Sustainability Studies*, 2, 40–58.

- Silvius, G., & Schipper, R. (2020). Exploring variety in factors that stimulate project managers to address sustainability issues. *International Journal of Project Management*, 38(6), 353-367.
- Stone, M. (1974). Cross-validators choice and assessment of statistical predictions. *Journal of the royal statistical society: Series B (Methodological)*, 36(2), 111–133.
- Su, X., Xu, A., Lin, W., Chen, Y., Liu, S., & Xu, W. (2020). Environmental leadership, green innovation practices, environmental knowledge learning, and firm performance. *SAGE Open*, 10(2).
- Suriyankietkaew, S., & Avery, G. (2016). Sustainable leadership practices driving financial performance: Empirical evidence from Thai SMEs. *Sustainability*, 8(4), 327.
- Ullah, M., Khan, M. W. A., Kuang, L. C., Hussain, A., Rana, F., Khan, A., & Sajid, M. R. (2020). A structural model for the antecedents of sustainable project management in Pakistan. *Sustainability*, 12(19), 8013.
- Zacharia, Z. G., Nix, N. W., & Lusch, R. F. (2011). Capabilities that enhance outcomes of an episodic supply chain collaboration. *Journal of operations Management*, 29(6), 591–603.
- Zack, M., McKeen, J., & Singh, S. (2009). Knowledge management and organizational performance: an exploratory analysis. *Journal of Knowledge Management*, 13(6), 392–409.
- Zafar, A., & Mustafa, S. (2017). SMEs and its role in economic and socio-economic development of Pakistan. *International Journal of Academic Research in Accounting, Finance and Management Sciences*, 6(4).
- Zulkiffli, N. A., & Latiffi, A. (2016). *Theoretical review on sustainable leadership (SL)*. In MATEC Web of Conferences (Vol. 66, No. 00045, pp. 1-8).