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**Integrating Mindful Organizing and Organizational Learning  
to Enhance Sustainability Performance of Exporting Firms**

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## Integrating Mindful Organizing and Organizational Learning to Enhance Sustainability Performance of Exporting Firms

### Abstract

**Purpose:** Sustainability is a pressing global issue that affects everyone on the planet. This study aims to provide a deeper understanding of the nuanced interplay between mindful organizing, organizational learning capability, leadership commitment to SDGs, and sustainability performance, adopting the theoretical foundation of organizational learning.

**Methodology:** The survey data from 728 middle management employees of exporting firms in Pakistan were collected at two points. The mediated moderation analysis was performed through structural equation modeling in AMOS 26.

**Findings:** The results indicate a positive relationship between mindful organizing and sustainability performance. The mediating effect of organizational learning capability highlights that firms that acquire, assimilate, and apply knowledge and insights leverage their mindful organizing strategies to improve sustainability performance more effectively. Additionally, the leadership commitment to SDGs amplifies the positive effect of organizational learning capability on sustainability performance.

**Implications:** These results have important implications for managers and policymakers who seek to promote sustainability in organizations. The findings suggest that cultivating a mindful organizational culture and investing in learning capability enhances sustainability performance. Exporting firms should develop comprehensive learning programs that embed mindfulness and sustainability into the core of organizational culture. More interdisciplinary research is needed to integrate insights from environmental science, psychology, management, and organizational behavior.

**Originality/Value:** This research stands out for its integrative approach, practical relevance, empirical examination of important concepts, and alignment with global sustainability goals. Exporting firms must understand how organizational learning capabilities and mindful organizing can be harnessed to achieve sustainable outcomes.

**Key Words:** Mindful Organizing; Learning Capability; Organizational Learning; SDGs; Sustainability Performance; Leadership Commitment

### INTRODUCTION

Sustainable development ensures the optimal utilization of resources to address current needs without compromising the ability of future generations to meet their own needs. In the corporate world, sustainability performance has emerged as a crucial factor for businesses, recognizing its positive impact on society and the environment, eventually enhancing firms' reputation and financial standing (Ullah et al., 2024a). Sustainability performance refers to an organization's ability to create value for stakeholders in an economically viable, socially responsible, and environmentally sustainable manner (Shang et al., 2020). It seeks a balance in the triple bottom line of economic growth, social equity, and environmental protection.

Globally, businesses emphasize sustainability and demonstrate a strong commitment to environmental and social responsibilities to attract customers, enhance brand reputation, and differentiate from competitors (Nguyen et al., 2023). Improving sustainability performance

enables an exporting firm to become a preferred entity for the stakeholders who prioritize sustainable practices in their decision-making. In addition, it helps firms enter European and North American export markets with stringent sustainability criteria and preferences (Joo et al., 2018). Brandi et al. (2020) found that a strong sustainability performance helped firms stand out in crowded export markets, distinguish their offerings, and attract sustainability-conscious customers. Awan et al. (2021) found that customers and investors are attracted to firms that emphasize sustainable practices and demonstrate their commitment to responsible growth and long-term viability. This trend underscores the increasing importance of sustainable practices in global trade, particularly for exporting firms.

However, sustainability challenges are complex and ever-evolving (Kumar et al., 2024; Sajjad & Shahbaz, 2020). Adding isolated sustainability initiatives is not enough to navigate the evolving business landscape; instead, it involves aligning the entire business model with sustainability principles (Shahbaz & Sajjad, 2021). In the literature, mindful organizing has been suggested as an approach that encourages organizations to remain adaptable and flexible in their approaches, being open to using new information, revisiting strategies based on the changing circumstances, and learning from successes and failures (Fischer et al., 2017; Ndubisi & Al-Shuridah, 2019). Mindful organizing is a dynamic, collective social process characterized by continuous real-time communication and interactions among organizational members to enable organizations to detect and correct errors and adapt to unexpected challenges (Ndubisi & Al-Shuridah, 2019). It shifts the organizational mindset from the traditional approach to a more holistic approach, fostering a learning culture that values sustainability (Gajda & Zbierowski, 2023). Awan (2019) suggests that mindful organizing helps export-oriented manufacturing firms align their operations with regulatory requirements and mitigate risks associated with non-compliance. It helps to reduce waste, conserve energy, and optimize resource allocation by encouraging employees to be mindful of their resource consumption (Bernal et al., 2018; Kumar et al., 2024). When organizations prioritize sustainability and integrate mindful practices into their operations, stakeholders, including customers, investors, and communities, view them more favorably (Ullah et al., 2024b).

The existing literature concerning mindful organizing centers on theoretical frameworks and conceptual discussions (Michaelsen et al., 2023; Sajjad & Shahbaz, 2020). Only some studies have ventured beyond theoretical discussions to prove how mindful organizing translates into tangible sustainability improvements (Alwadani & Ndubisi, 2020; Fischer et al., 2017; Gajda & Zbierowski, 2023). This gap in empirical research limits our ability to provide nuanced and evidence-based recommendations to organizations seeking to enhance their sustainability performance through mindful organizing (do Prado et al., 2020; Krishnan, 2021; Thiermann & Sheate, 2022). This study bridges the gap between theory and practice in sustainability initiatives, offering insights that can lead to more effective organizational strategies. The contribution of this research lies in its empirical examination of the synergy between mindful organizing, learning capability, and leadership commitment toward Sustainable Development Goals (SDGs). Hence, this study is timely and essential for organizations seeking to enhance their sustainability performance through mindful organizing.

## LITERATURE REVIEW

The concept of sustainability in organizations has garnered considerable attention, especially in global challenges and commitments to SDGs (Buranapin et al., 2023). While all SDGs are important, not every goal will align directly with the mission or capabilities of every organization (Heras-Saizarbitoria et al., 2022). Organizations should identify which goals intersect with their core business strategies, capabilities, and market expectations (Badham & King, 2021; Berrone et al., 2023). Organizations should not only fulfill economic,

environmental, and social criteria but also use organizational learning to integrate these principles into their practices and values (Edwards, 2009). This focus allows them to deploy their resources more effectively and significantly impact those areas. Central to this discourse is the role of mindful organizing, which harnesses an organization's ability to identify and capture sustainable opportunities by redesigning supply chains, integrating sustainability metrics into performance evaluations, and promoting a culture that values sustainability and mindfulness (Badham & King, 2021; Brendel, 2022; Iqbal et al., 2024). Mindful organizing goes beyond spreading awareness, as it encourages the organizations to audit their current activities and strategies to identify which SDGs they are already contributing to and where there is potential to increase alignment (Ferrero-Ferrero et al., 2023). It is implemented through continuous training, maintaining operational awareness, and fostering an organizational culture that values detailed understanding and checks (Bernal et al., 2018; Petitta & Martínez-Córcoles, 2023). On the other hand, socially responsible management focuses on policies that enforce ethical practices, corporate governance structures, and initiatives that benefit the environment and community (Foster, 2021; Persic et al., 2018).

Fischer et al. (2017) describe mindfulness as an approach that enables organizations to remain adaptable, continuously learn, and make informed decisions considering the interconnectedness of environmental, social, and economic factors. However, their research primarily focused on theoretical aspects, needing more empirical evidence in diverse industry contexts. It highlights a gap in the literature, focusing mainly on theory building (Preghenella & Battistella, 2021), and empirical studies could provide valuable insights into the practical applications of mindful organizing across different sectors. Umar and Chunwe (2019) found that exporting firms adopt mindful organizing principles to develop the ability to identify emerging sustainability trends, respond to market demands, and integrate sustainable practices into their operations. Ndubisi and Al-Shuridah (2019) discussed the holistic perspective of mindful organizing in considering environmental, social, and economic factors. However, they did not fully explore how this translates into quantifiable sustainability performance. Krishnan (2021) found that mindful organizing creates a sustainable competitive advantage by improving individual and organizational performance. Gajda and Zbierowski (2023), Michaelsen et al. (2023), and Thiermann and Sheate (2021) argue that further research is needed to understand the nuanced relationship between mindful organizing and sustainability performance. However, including examples from various industries beyond the typical environmental focus suggests that mindful organizing is applicable across a broad spectrum of sectors, enhancing its relevance and utility in achieving sustainability. The findings of relevant studies are reported in Table I.

### **Table I: Findings of studies from the literature**

Heras-Saizarbitoria et al. (2022) draw on the theoretical lens of organizational learning to assert that acquiring, interpreting, and applying new knowledge is crucial for organizations to implement sustainable practices effectively. It fosters creating, retaining, and transferring knowledge within an organization (Hutasuhut et al., 2021). This theory posits that organizations that can learn and adapt are more likely to be successful and sustainable in the long term. Therefore, the role of organizational learning as a mediator in this process is critical. It enables organizations to internalize and adapt to sustainability practices effectively. Organizations that practice mindful organizing gather information about their sustainability performance, reflect on it, and use it to inform decisions (Buranapin et al., 2023). Nguyen et al. (2023) argue that exporting firms practicing mindful organizing sense changes not only in economic factors but also in environmental and social dimensions, allowing them to grasp opportunities for sustainable business practices. This continuous cycle of gathering, reflecting,

and acting is at the heart of organizational learning (Beke et al., 2023). Thus, organizational learning provides a theoretical framework explaining how mindful organizing improves sustainability performance. The conceptual framework adopted in this study, rooted in organizational learning, is presented in Figure 1.

## HYPOTHESIS DEVELOPMENT

### *Mindful Organizing and Sustainability Performance*

Sustainability performance for exporting firms is intrinsically linked to their capacity to learn and adapt, encompassing the balance and integration of economic, environmental, and social considerations in their operations, strategies, and decisions (Gupta & Chauhan, 2021; Siebenhüner & Arnold, 2007). This performance is a comprehensive assessment of a firm's impact on the planet, society, and economic well-being and is deeply influenced by the firm's continuous learning and adaptability (Edwards, 2021). In the dynamic global marketplace, the ability to rapidly assimilate and respond to sustainability criteria set by international buyers, retailers, and supply chain partners is crucial (Brandi et al., 2020; Heras-Saizarbitoria et al., 2022). Exporting firms can qualify for sustainable sourcing initiatives, certifications, and partnerships by demonstrating their performance in the triple bottom line (Arora & De, 2020).

Mindful organizing is rooted in organizational learning theory. It encourages firms to continuously acquire and apply new knowledge for innovation, fostering creative problem-solving and understanding evolving market needs (Krishnan, 2021). Exporting firms adopting mindful organizing develop new, sustainable products and services, leveraging their learned insights to gain competitive advantages (Gupta & Chauhan, 2021). This approach enhances market access and supports sustainable business growth, underpinned by the firm's ongoing learning and adaptation processes (Joo et al., 2018). Nguyen and Hoai (2023) emphasize that mindful organizing helps identify and mitigate risks associated with resource scarcity, regulatory changes, and reputational damage, safeguarding economic interests. Additionally, mindful organizing prompts firms to continuously evaluate and improve the environmental impact of their operations (Wang et al., 2023). Adopting environment-friendly technologies and practices becomes a natural outcome of mindful organizing, contributing to a reduction in carbon footprints and overall environmental harm (Nguyen et al., 2023; Sajjad & Shahbaz, 2020; Vogus & Sutcliffe, 2012).

Furthermore, mindful organizing enhances stakeholder engagement and social sustainability (Badham & King, 2021; Mak & Hong, 2020). It fosters a culture where diversity and inclusion are continually learned and embedded into the workplace, creating a positive and inclusive environment. The firm's mindfulness towards fair labor practices and social initiatives significantly enriches its social sustainability performance, reinforcing its reputation as a socially responsible entity (Ahmad & Ullah, 2023; Krings & Schusler, 2020; Nguyen & Hoai, 2023). Thus, mindful organizing fosters a holistic approach to sustainability, aligning economic growth with environmental stewardship and social responsibility. Therefore, it is proposed that:

H<sub>1a</sub>: Mindful organizing has a positive effect on the environmental performance of a firm

H<sub>1b</sub>: Mindful organizing has a positive effect on the economic performance of a firm

H<sub>1c</sub>: Mindful organizing has a positive effect on the social performance of a firm

### *Mediating Role of Organizational Learning Capability*

Mindful organizing, conceptualized by authors like Ndubisi and Al-Shuridah (2019), encourages organizations to continuously scan, interpret, and reflect upon their internal and

external environments. This vigilant approach helps identify sustainability-related opportunities and challenges (Kokkaew et al., 2022). However, the mere identification of these elements is not sufficient. Here, organizational learning steps in, mainly through knowledge acquisition and interpretation (Beke et al., 2023).

Organizational learning enables firms to identify new information related to sustainability and understand and interpret it in the context of their operations (Gajda & Zbierowski, 2023; Siebenhüner & Arnold, 2007). This process is crucial for organizations to align their strategies with sustainability principles. For instance, learning about new environmental regulations or social trends enables firms to adapt their practices proactively, ensuring compliance and maintaining their social license to operate (Belinski et al., 2020). However, once knowledge is acquired and interpreted, it must be effectively disseminated within the organization. Organizational learning facilitates knowledge sharing across different departments and levels (Palos & Veres Stancovici, 2016; Smith, 2012; Migdadi, 2021). This dissemination ensures that all parts of the organization know sustainability practices and principles, leading to a more cohesive and coordinated effort towards sustainability goals.

Moreover, organizational learning contributes to developing an organizational memory, which stores valuable knowledge and experiences related to sustainability (Kokkaew et al., 2022; Peschl, 2023; Ullah et al., 2023). This knowledge repository becomes a reference point for future sustainability initiatives, enabling organizations to learn from past successes and failures. It ensures that mindfulness in organizational practices is not a one-off event but a sustained effort, continuously evolving and improving over time (Michaelsen et al., 2023; Weick & Sutcliffe, 2006). Finally, organizational learning facilitates the integration of sustainability into the organization's culture and strategy (Wang et al., 2022). Mindful organizing requires a shift in mindset and values towards more sustainable practices. Organizational learning provides the framework and tools for this integration, ensuring sustainability is embedded in the organization's DNA (Kokkaew et al., 2022; Migdadi, 2021). Therefore, it can be proposed that:

H<sub>2a</sub>: Organizational learning capability mediates the relationship between mindful organizing and environmental sustainability performance.

H<sub>2b</sub>: Organizational learning capability mediates the relationship between mindful organizing and economic sustainability performance.

H<sub>2c</sub>: Organizational learning capability mediates the relationship between mindful organizing and social sustainability performance.

#### *Moderating Role of Leadership Commitment to SDGs*

The organizational learning process is central to an organization's ability to innovate and adapt, especially in dynamic and competitive international markets (Liboni et al., 2023; Smith, 2012). Research has consistently shown that firms with higher learning capabilities are more adept at implementing sustainable practices (Sahibzada et al., 2023; Wang et al., 2022). These firms are better at identifying their operations' environmental and social impacts, understanding stakeholder concerns, and innovating sustainable solutions (Awan et al., 2021; Krings & Schusler, 2020; Ullah et al., 2023). They also tend to be more responsive to regulatory changes and market trends related to sustainability (Ullah et al., 2024c).

However, the leadership's commitment to the SDGs plays a crucial moderating role in this relationship. Leadership commitment to SDGs refers to the dedication and active support of the top management for achieving the targets outlined in the United Nations Sustainable

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3 Development Goals (Heras-Saizarbitoria et al., 2022; Ojo & Fauzi, 2020). It involves aligning  
4 organizational strategies, policies, and practices with the SDGs and championing sustainability  
5 initiatives within the organization (Khan et al., 2025; Wang, 2019). Leaders committed to  
6 SDGs empower organizations to innovate sustainably through enhanced learning capabilities  
7 (Khan & Ullah, 2025; Xie, 2019). Ferrero-Ferrero et al. (2023) found that early adoption of  
8 SDG reporting is related to leadership commitment to sustainability frameworks.  
9

10  
11 Leadership commitment to the SDGs amplifies the impact of organizational learning on  
12 sustainability performance in several ways. For example, leaders committed to the SDGs first  
13 guide the organization's learning processes to focus on sustainability-related knowledge and  
14 skills (Kokkaew et al., 2022; Latif & Ullah, 2024). This alignment ensures that the learning is  
15 relevant and directly enhances sustainability performance. Secondly, committed leaders are  
16 more likely to allocate resources to learning initiatives promoting sustainability (Ghasemy et  
17 al., 2023). Exporting firms committed to SDGs invest in technology, processes, and practices  
18 such as energy-efficient production methods, waste reduction measures, and responsible supply  
19 chain management to improve sustainability performance (Arora & De, 2020; Bernal et al.,  
20 2018; Edwards, 2021; Khalid et al., 2022). Thirdly, leaders influence organizational culture  
21 (Maqbool et al., 2024). Leadership that values SDGs fosters a culture where sustainability is a  
22 core value (Malik & Ullah, 2024; Petitta & Martínez-Córcoles, 2023; Wang, 2019; Xie, 2019).  
23 This cultural shift enhances the organization's openness to learning about sustainable practices  
24 and integrating them into everyday operations. Thus, leadership commitment to SDGs creates  
25 a synergistic effect that propels the exporting firm toward improved sustainability performance  
26 aligned with global sustainability goals. Therefore, it can be proposed that:  
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30  $H_{3a}$ : Leadership commitment to SDGs moderates the relationship between organizational  
31 learning capability and environmental performance.  
32

33  $H_{3b}$ : Leadership commitment to SDGs moderates the relationship between organizational  
34 learning capability and economic performance.  
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36  $H_{3c}$ : Leadership commitment to SDGs moderates the relationship between organizational  
37 learning capability and social performance.  
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### 39 *Mediated Moderation Effect*

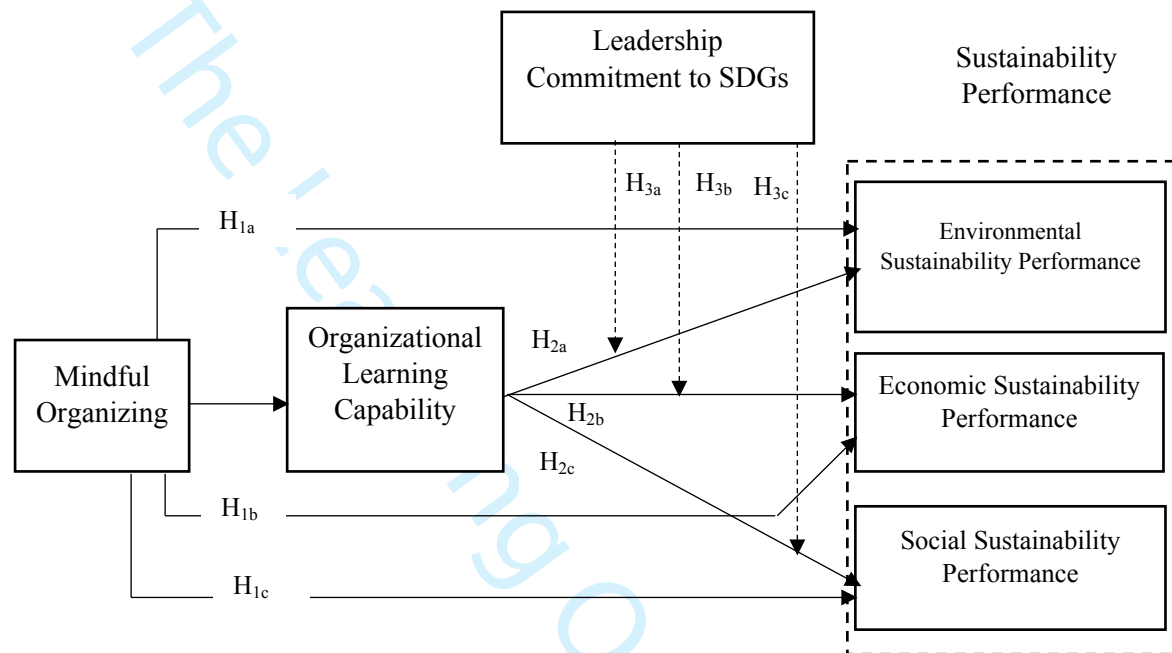
40  
41 Mindful organizing serves as the initial driver for sustainability performance, suggesting that  
42 when firms are attentive and responsive to the dynamics of their internal and external  
43 environments, they are better positioned to achieve sustainability. Organizational learning  
44 capability mediates this relationship, implying that the ability to learn and adapt is how mindful  
45 organizing translates into sustainable performance. Leadership commitment to SDGs further  
46 moderates the effect of organizational learning capability on sustainability performance. It  
47 means that leaders dedicated to the SDGs can enhance the firm's ability to apply their learning  
48 capabilities to improve environmental, economic, and social sustainability outcomes. Thus,  
49 leadership commitment to SDGs does not just add to the direct effect of mindful organizing on  
50 sustainability performance but also multiplies the impact of the learning processes that mediate  
51 this relationship. Therefore, it can be proposed that:  
52  
53

54  $H_{4a}$ : The relationship between mindful organizing and environmental sustainability  
55 performance, mediated by organizational learning capability, is moderated by a leadership  
56 commitment to SDGs.  
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58  
59  
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H<sub>4b</sub>: The relationship between mindful organizing and economic sustainability performance, mediated by organizational learning capability, is moderated by a leadership commitment to SDGs.

H<sub>4c</sub>: The relationship between mindful organizing and social sustainability performance, mediated by organizational learning capability, is moderated by a leadership commitment to SDGs.

**Figure 1: Conceptual framework of the study**



Source: Authors

## METHODOLOGY

According to the World Bank (2022), the contribution of exporting firms to Pakistan's GDP was 13% in 2013, which has since declined to 10% in 2023. The reduction in exporting firms' contribution to GDP and their share in global trade has implications for Pakistan's economic development and competitiveness (Pakistan Business Council, 2023). The sustainability performance of exporting firms is vital for compliance with global market demands and enhancing Pakistan's national branding and reputation. International buyers and consumers are becoming more conscious of their products' environmental and social impact (Arora & De, 2020; Asadi et al., 2020; Joo et al., 2018). Therefore, exporting firms are subject to observing various international standards and regulations related to sustainability, such as environmental protection, labor rights, and product safety, to report their sustainability performance (Nguyen et al., 2023). Therefore, it is crucial to understand what constraints firms in developing countries face and how they can improve their sustainability performance in those challenges.

### *Sampling and Data Collection*

This study targeted manufacturing firms with more than 50% of export revenues. The study constructs needed informed individuals from the targeted organizations to complete the survey. The middle managers actively share information between top and first-line managers, thus being most informed about organizational policies (Ullah et al., 2023). The middle managers were identified through organizational hierarchies from company websites and HR contacts.

Prior to commencing data collection, written informed consent was obtained from all

participants. Participants were informed of the study's aims, the right to refuse participation or withdraw from the study at any time, and the authors confirmed that the anonymity and confidentiality of the participants were maintained and respected throughout.

The study leveraged professional networks, including trade and industry groups on WhatsApp, to disseminate the invitation further and engage potential participants. 980 middle managers in 525 manufacturing firms accepted the invitation for voluntary participation in the study. Data was collected at two points in time to reduce common method bias. In time 1, 768 respondents provided data on the firm's sustainability performance and leadership commitment to SDGs, making a response rate of 78%. In time 2, three weeks after the first round, 768 respondents were requested to provide information on mindful organizing and organizational learning capability. The questionnaire was created on Google Forms, and 728 completed responses for both rounds were received.

### *Measurement*

The initial part of the questionnaire was designed to shortlist the participating firms based on their percentage of revenues earned through exports. The next part only opened if the answer was more than 50%; in other cases, respondents were thanked for their voluntary participation in the survey. This questionnaire setting was crucial to meet the aimed research criteria. The demographic information about gender, age, designation, and years of experience with the firm was asked in section one. Three items for environmental sustainability and three items for social sustainability were adapted from Asadi et al. (2020) and Wang (2019) to measure environmental sustainability performance. These items were tested for validity and reliability in previous studies such as Souto (2022) and Ullah et al. (2024a). Four items for economic sustainability performance were adapted from Li (2014). These items were tested for validity and reliability by Gu (2023), Saunila et al. (2018), and Ullah et al. (2024a). Seven items were adapted from Ndubisi and Al-Shuridah (2019) to measure mindful organizing. These items were tested for reliability and validity in studies such as Alwadani and Ndubisi (2020) and Curcuruto et al. (2024). Organizational learning capability was measured with a nine-item scale adapted from Jerez-Gomez et al. (2005). Ferreira et al. (2021) and Migdadi (2021) tested these items for reliability and validity. Leadership commitment to SDGs was measured with a three-item scale adapted from Ojo and Fauzi (2020). These items were tested for reliability and validity in studies such as Alzghoul et al. (2024). All items were measured on a 7-point scale.

Heggstad et al. (2019) argued that adapted scales should be supported with some evidence proving their reliability and validity. The questionnaire was shared with five experienced researchers to get feedback on the relevance and understandability of statements. Minor changes were made to the statements, and a modified version was shared with 30 middle management employees of manufacturing firms to test the reliability and validity of the scale. The estimates derived through the pilot survey confirmed the values of Cronbach's alpha above 0.7 and factor loadings above 0.6, whereas the average variance extracted values were also above 0.5 for all variables. Therefore, the items were deemed reliable and valid for further data collection.

## **RESULTS**

### *Measurement Model Validation*

The data analysis was performed in AMOS 26 to estimate structural equation modeling. In a two-step process, confirmatory factor analysis was performed to test the validity and reliability of the model. The goodness of model fit indices, including  $\chi^2/df=3.28$ , NFI=0.871, TLI=0.923, CFI=0.925, GFI=0.824, RMR= 0.053, RMSEA=0.065—were all within the cut-off range,

proving that model fits well with the data. Byrne (2013) suggested that while a GFI value above 0.90 is traditionally considered acceptable, values slightly below this threshold can be tolerated in complex models, particularly if other fit indices are acceptable. MacCallum et al. (1996) proposed that RMSEA values between 0.05 and 0.08 indicate a satisfactory model fit. The results reported in Table II show that the values of Cronbach's Alpha were more than 0.70 criterion value (Hair et al., 2019). Also, composite reliability (CR) values were above 0.60 (Hair et al., 2019), proving the model's internal consistency. The values of average variance extracted were more than 0.50 criterion values (Hair et al., 2019), confirming the convergent validity of the data. The discriminant validity, measured through the Fronell-Larcker criterion, shows that the values of the square root of AVE were more than the inter-constructed correlation estimates, proving the discriminant validity of the data. According to Podsakoff et al. (2023), evaluating common method bias (CMB) in studies based on self-reported data is essential. Herman's single-factor test was 32.8%, less than the 50% cut-off value (Kock et al., 2021); therefore, CMB does not affect estimates in this study, and the model fulfills the criteria of reliability and validity.

## Table II: Reliability and validity estimates

### *Path Analysis*

Hypotheses testing was performed through covariance-based structural equation modeling (SEM) in AMOS 26. The path analysis estimates for direct, indirect, and moderating effects are reported in Table III and Figure 2. The impact of mindful organizing on environmental performance is significant ( $\beta = 0.218^{***}$ ), supporting  $H_{1a}$ . Similarly, the statistically significant effect of mindful organizing on economic performance ( $\beta = 0.225^{***}$ ) and social performance ( $\beta = 0.258^{***}$ ) supports  $H_{1b}$  and  $H_{1c}$ . Thus, all three hypotheses for the direct effect of mindful organizing on the sustainability performance of exporting firms are supported by empirical evidence.

## Table III: Structural equation modeling estimates for hypothesis testing

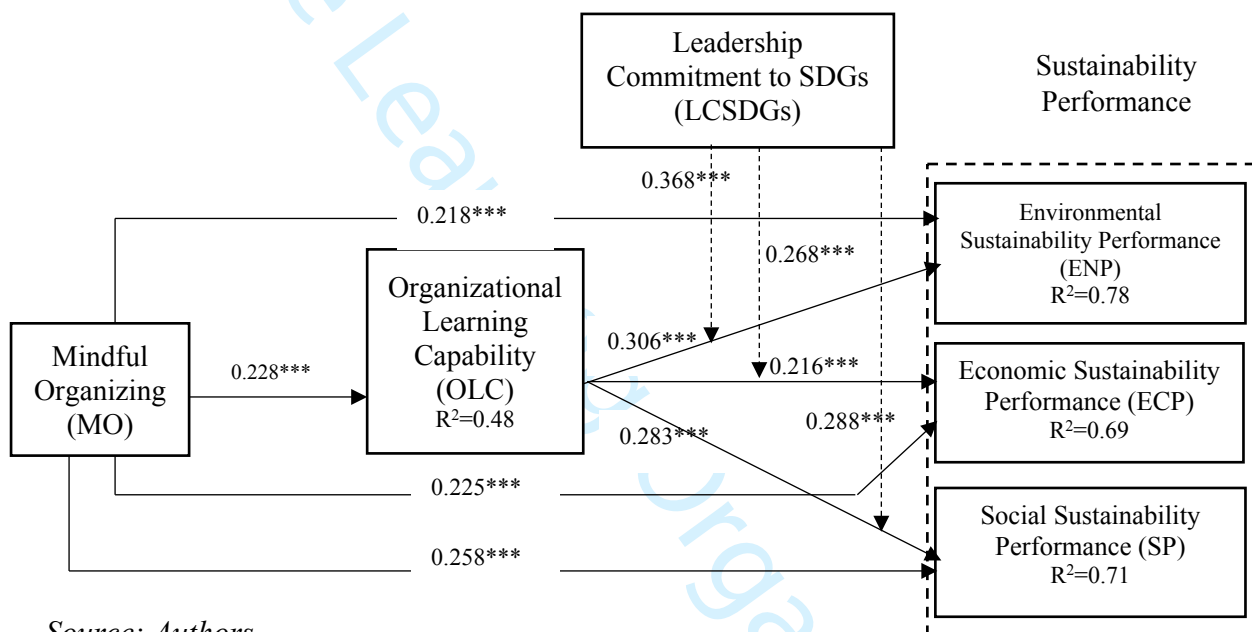
The direct and indirect effects of testing the mediating effect of organizational learning capability were estimated through bootstrapping analysis. The direct impact of  $MO \rightarrow ENP = 0.218^{***}$ ,  $MO \rightarrow OLC = 0.228^{***}$ , and  $OLC \rightarrow ENP = 0.306^{***}$ , and the indirect effect  $MO \rightarrow OLC \rightarrow ENP = 0.197^{***}$ , were all statistically significant, proving mediation of the organizational learning capability, supporting  $H_{2a}$  to be correct. Similarly, the direct impact of  $MO \rightarrow ECP = 0.225^{***}$ ,  $MO \rightarrow OLC = 0.228^{***}$ , and  $OLC \rightarrow ECP = 0.216^{***}$ , and the indirect effect of  $MO \rightarrow OLC \rightarrow ECP = 0.172^{***}$  were all statistically significant, proving organizational learning capability mediates the relationship between mindful organizing and economic performance of firms; therefore,  $H_{2b}$  is supported. Also, the direct effects of  $MO \rightarrow SP = 0.258^{***}$ ,  $MO \rightarrow OLC = 0.228^{***}$ , and  $OLC \rightarrow SP = 0.283^{***}$ , and the indirect impact of  $MO \rightarrow OLC \rightarrow SP = 0.226^{***}$  were all statistically significant, proving organizational learning capability mediates the relationship between mindful organizing and social sustainability performance of firms, supporting  $H_{2c}$ . Thus, the empirical evidence demonstrates the mediation of organizational learning capability in the effect of mindful organizing on the sustainability performance of exporting firms.

The moderating effect of leadership commitment to SDGS in the relationship between organizational learning capability and the sustainability performance of exporting firms was tested through direct and combined effects. The statistically significant results of  $MO * LCSDGs \rightarrow ENP = 0.368^{***}$ ,  $MO * LCSDGs \rightarrow ECP = 0.268^{***}$ , and  $MO * LCSDGs \rightarrow SP = 0.288^{***}$  show that leadership commitment to SDGs significantly moderates the relationship between

mindful organizing and dimensions of sustainability performance. Therefore, all three moderating effect hypotheses (H3a, H3b, and H3c) are supported by empirical evidence.

The results of mediated moderation imply that the context (leadership commitment to SDGs) plays a significant role in how mindful organizing influences the sustainability performance of exporting firms through organizational learning capability. The significant path coefficients for LCSDGs +1SD (one standard deviation higher than the mean LCSDG) support H<sub>4a</sub>, H<sub>4b</sub>, and H<sub>4c</sub>. Therefore, empirical evidence shows that leadership commitment is crucial in amplifying the effects of mindful organizing and learning capabilities on achieving better sustainability outcomes. It could have practical implications for how organizations approach these variables in different contexts.

**Figure 2: Structural path diagram for SEM estimates**



Source: Authors

## DISCUSSION

The findings reflect that mindful organizing significantly positively affects three dimensions of sustainability performance: environmental, economic, and social. This relationship is significantly mediated by the organizational learning capability and moderated by the leadership commitment to SDGs. The findings align with some previous studies in the literature (Fischer et al., 2017; Ndubisi & Al-Shuridah, 2019; Nguyen et al., 2023). The positive effect of mindful organizing on the sustainability performance of exporting firms aligns with the notion that organizational mindfulness can lead to more sustainable practices and outcomes (Krishnan, 2021; Michaelsen et al., 2023; Vogus & Sutcliffe, 2012). The findings corroborate our assumptions that exporting firms adopting mindful organizing practices in Pakistan are more likely to demonstrate better sustainability performance across all three dimensions.

The mediating effect of OLC suggests that the impact of mindful organizing on sustainability performance is channeled through an organization's ability to acquire, interpret, and apply sustainability-related knowledge (Kokkaew et al., 2022; Sahibzada et al., 2023; Smith, 2012). This process enables firms to integrate and operationalize sustainability into their core practices, crucial for long-term sustainability adaptations and innovations. An exporting firm with high OLC is better equipped to respond to sustainability challenges, adapt to changing circumstances, and implement sustainable practices effectively (Battistella et al., 2021; Xie,

2019). Therefore, exporting firms must prioritize learning and knowledge management in their sustainability initiatives (Siebenhüner & Arnold, 2007). It will enhance their ability to identify and seize sustainability opportunities, overcome barriers, and optimize sustainability performance by fostering a culture of continuous learning (Beke et al., 2023; Smith, 2012; Wang et al., 2022).

The moderating role of leadership commitment to the SDGs indicates the catalytic role of leadership commitment in driving sustainability performance. Leadership commitment strengthens organizational governance and integrates sustainability principles into the firms' cultural and strategic frameworks (Ferrero-Ferrero et al., 2023; Ojo & Fauzi, 2020). It catalyzes the effect of mindful organizing and organizational learning capability on sustainability performance (Ghasemy et al., 2023). This insight is especially pertinent for exporting firms operating across diverse markets and can significantly influence sustainability standards through their global operations. Exporting firms are uniquely positioned to act as ambassadors of sustainability, influencing both global supply chains and local markets through the adoption of these practices (Buranapin et al., 2023; Ndubisi & Al-Shuridah, 2019; Nguyen & Hoai, 2023). It underscores the significance of leadership in promoting sustainability and emphasizes the need for leaders to embrace and champion sustainable practices (Edwards, 2021; Heras-Saizarbitoria et al., 2022). The study enriches the sustainability literature by demonstrating the effectiveness of combining mindful organizing with a learning capability and leadership focus to achieve SDGs, offering an innovative approach in the context of exporting firms, which has been explored less in previous research.

## IMPLICATIONS

This study contributes novel insights into how micro-level organizational practices like mindful organizing are systematically linked to macro-level outcomes such as enhanced sustainability performance. It advances theoretical frameworks by integrating mindful organizing, organizational learning capability, and leadership commitment to SDGs into a cohesive model that explains sustainability performance. The findings provide valuable insights for academia and industry, offering a nuanced understanding of how mindful organizing impacts sustainability performance. Findings underscore the importance of holistic approaches for sustainability in organizational strategy and management.

The study contributes to the organizational learning theory by demonstrating how mindful organizing influences sustainability performance through organizational learning capability. The impacts of mindful organizing are consistent across different sustainability contexts (environmental, economic, social), suggesting that mindful organizing is a robust predictor of sustainability outcomes across various domains. Future theoretical work might explore other contextual variables influencing these relationships, such as industry type, organizational size, or cultural factors. In addition, the mediating role of organizational learning capability suggests that simply adopting mindful organizing practices may not be sufficient for improving sustainability performance unless coupled with enhanced learning capabilities. It provides a new perspective on how firms learn and adapt for sustainability, extending the organizational learning theory beyond its traditional boundaries. Mindful organizing, a concept primarily explored in safety and reliability research, is also relevant in improving sustainability performance. It calls for more interdisciplinary research, integrating insights from environmental science, psychology, management, and organizational behavior.

The findings show that organizations investing in mindful organizing will likely see enhanced sustainability outcomes. It could help companies in practical terms by improving their compliance with sustainability goals and enhancing their reputation. However, managers

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3 should understand that mindful organizing involves a holistic view of business practices,  
4 considering internal processes and close engagement with external stakeholders (Fischer et al.,  
5 2017; Kumar et al., 2024). It requires open communication channels and the development of  
6 partnerships for collective sustainability efforts. Therefore, exporting firms should develop  
7 comprehensive learning programs that embed mindfulness and sustainability into the core of  
8 organizational culture. It includes scenario planning, crisis management exercises, and  
9 sustainability-focused case studies. They should deepen their involvement with suppliers,  
10 customers, communities, and regulatory bodies to collaboratively work towards achieving  
11 SDGs. Leadership development programs should incorporate SDG training, emphasizing  
12 aligning business strategies with these goals. Leaders in exporting firms should visibly support  
13 sustainability goals and integrate them into the company's strategy and operations.  
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16 As mindful organizing positively affects environmental, economic, and social sustainability  
17 performance, it directly aligns with multiple SDGs, such as SDG 13 (Climate Action), SDG 8  
18 (Decent Work and Economic Growth), and SDG 10 (Reduced Inequalities). Exporting firms  
19 that adopt mindful organizing can contribute to these goals by improving their sustainability  
20 metrics. It encourages a systematic approach to addressing problems and adapting to changes,  
21 critical for tackling complex global challenges addressed by the SDGs. It is particularly  
22 relevant for exporting firms that operate in diverse and often challenging international markets.  
23 Moreover, exporting firms with high learning capabilities can act as conduits for cross-border  
24 and cross-sectoral learning about sustainable practices, spreading knowledge and innovation  
25 related to SDGs across different regions and industries. Firms should integrate SDG priorities  
26 into their leadership development programs to ensure that top management champions  
27 sustainability initiatives aligned with the SDGs, fostering a culture that supports long-term  
28 sustainability goals.  
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32 The findings inform policymaking, emphasizing the need for support structures that encourage  
33 mindful organizing and learning capabilities in businesses to improve the achievement of  
34 SDGs. Training and education programs should focus on how companies can contribute to  
35 SDGs through mindful organizing and enhanced organizational learning. These programs  
36 should target current and future leaders, emphasizing the practical aspects of integrating SDG-  
37 focused strategies into business operations. Moreover, policymakers should encourage public-  
38 private partnerships that focus on achieving SDGs. These partnerships could focus on joint  
39 initiatives, such as sustainability-focused innovation labs or community engagement programs,  
40 which can amplify the impact of mindful organizing and leadership commitment to broader  
41 sustainability goals.  
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## 44 CONCLUSIONS

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46 This research provides valuable insights into the relationship between mindful organizing and  
47 sustainability performance, focusing on exporting firms' environmental, economic, and social  
48 sustainability performance. The findings demonstrate a positive effect of mindful organizing  
49 on sustainability performance across these three dimensions. Moreover, the organizational  
50 learning capability fully mediates the relationship between mindful organizing and  
51 sustainability performance and is moderated by a leadership commitment to SDGs. Leadership  
52 commitment integrates sustainability principles into the organizational culture and strategy.  
53 The statistically significant moderating effect shows the need for exporting firms to prioritize  
54 learning and knowledge management as integral components of their sustainability initiatives.  
55 Furthermore, exporting firms should enhance their ability to acquire and share knowledge,  
56 engage in experimentation, and continuously improve sustainability practices by developing  
57 learning capabilities. The findings contribute to understanding the interplay between mindful  
58 organizing, organizational learning capability, leadership commitment to the SDGs, and  
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sustainability performance of exporting firms. The study emphasizes the importance of taking a comprehensive approach to sustainability, recognizing that it requires mindful organizing practices, strong leadership commitment, and a culture that fosters continuous learning.

## LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

It is worth noting that the findings of this research are based on a specific context and sample. Therefore, generalizing to other industries or organizational settings should be done cautiously. Further research could explore these relationships in different contexts, considering additional mediators or moderators, and examine long-term effects to provide a more nuanced understanding of the factors influencing the relationship between mindful organizing and sustainability performance. Also, the cross-sectional design limits the ability to establish causal relationships between mindful organizing, sustainability performance, leadership commitment to SDGs, and organizational learning capability. Longitudinal studies or experimental designs could provide more substantial evidence of causality and capture the temporal dynamics of these relationships. Conducting cross-cultural or cross-industry comparative studies would help elucidate the cultural or contextual factors and provide valuable insights into the boundary conditions and variations in these relationships.

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**Table I: Findings of studies from the literature**

Study	Main Findings
Wang et al. (2023)	Organizational learning plays a mediating role between organizational resilience and sustainable competitive advantage in Chinese companies.
Ghasemy et al. (2023)	Leadership commitment to the SDGs plays a crucial role in achieving them through research, innovation, and leadership in education.
Petitta and Martínez-Córcoles (2023)	Mindful organizing fosters a culture that improves an organization's ability to respond to crises. It increases worker safety and organizational effectiveness in unpredictable situations.
Nguyen and Hoai (2023)	Mindful organizing influences ethical behavior, ensuring the organization's social sustainability. Internal control coupled with mindful organizing contributes to ethical business practices.
Wang et al. (2022)	Green learning orientation positively affects sustainable performance through green innovation behavior, with corporate social responsibility (CSR) playing a moderating role.
Kokkaew et al. (2022)	Organizational learning significantly mediates between HRM and the firm's sustainability.
Battistella et al. (2021)	Organizational learning processes have a substantial and positive relationship with business sustainability, with a stronger effect on total sustainable performance than on any specific dimension.
Krishnan (2021)	Mindful organizing creates a sustainable competitive advantage by improving individual and organizational performance.
Ndubisi et al. (2020)	Mindful organizing significantly enhances environmentally sustainable outcomes in multinational enterprises in the oil and gas sector in the Arabian Gulf.
Umar and Chunwe (2019)	Mindfulness-based organization systems positively impact environmental quality through improved energy consumption, water utilization, and waste management.
McDonald et al. (2019)	Mindful organizing in the aviation industry ensures that operational actions are informed by the most current, relevant information about potential risks, improving organizational learning capability.
Matthews et al. (2017)	Organizational learning capability is significantly related to business sustainability in manufacturing SMEs.
Sánchez and Mitchell (2017)	Organizational learning through impact assessment can improve project sustainability by acquiring knowledge, developing new behaviors, and fostering sustainability-oriented norms and values.

*Source: Authors*

**Table II: Reliability and validity estimates**

Variables	Cronbach's Alpha	CR	ENP	ECP	SP	LCSDGs	OLC	MO	AVE
ENP	<b>0.88</b>	<b>0.82</b>	<b>0.852</b>						<b>0.726</b>
ECP	0.81	0.79	0.213***	<b>0.836</b>					<b>0.699</b>
SP	0.89	0.85	0.249***	0.411***	<b>0.902</b>				<b>0.815</b>
LCSDGs	0.91	0.86	0.381***	0.424*	0.263***	<b>0.895</b>			<b>0.801</b>
OLC	0.88	0.84	0.330***	0.254***	0.212***	0.098*	<b>0.828</b>		<b>0.685</b>
MO	0.81	0.78	0.251**	0.336***	0.280***	0.481***	0.469***	<b>0.871</b>	<b>0.758</b>

\*Note: values in bold on the diagonal show  $\sqrt{\text{AVE}}$ , whereas off-diagonal values are inter-construct correlation coefficients, and higher diagonal values show a sufficient level of discriminant validity. The last column shows the values of AVE,

\* $\alpha=0.05$ , \*\* $\alpha=0.01$ , \*\*\* $\alpha=0.001$

Composite Reliability=CR, Environmental Sustainability Performance=ENP, Economic Sustainability Performance=ECP, Social Sustainability Performance=SP, Leadership Commitment to SDGs=LCSDGs, Organizational Learning Capability=OLC, Mindful Organizing=MO, Average Variance Extracted=AVE

Source: Authors

**Table III: Structural equation modeling estimates for hypothesis testing**

Hypothesis	Path	$\beta$ value	Result	
H <sub>1a</sub>	MO→ENP	0.218***	Supported	
H <sub>1b</sub>	MO→ECP	0.225***	Supported	
H <sub>1c</sub>	MO→SP	0.258***	Supported	
H <sub>2a</sub>	MO→OLC	0.228***	Supported	
	OLC→ENP	0.306***		
	MO→OLC→ENP	0.197***		
H <sub>2b</sub>	MO→OLC	0.228***	Supported	
	OLC→ECP	0.216***		
	MO→OLC→ECP	0.172***		
H <sub>2c</sub>	MO→OLC	0.228***	Supported	
	OLC→SP	0.283***		
	MO→OLC→SP	0.226***		
H <sub>3a</sub>	MO*LCSDGs→ENP	0.368***	Supported	
H <sub>3b</sub>	MO*LCSDGs→ECP	0.268***	Supported	
H <sub>3c</sub>	MO*LCSDGs→SP	0.288***	Supported	
H <sub>4a</sub>	MO→OLC→ENP	LCSDGs -1SD	0.122*	Supported
	MO→OLC→ENP	LCSDGs Mean	0.181***	
	MO→OLC→ENP	LCSDGs +1SD	0.289***	
H <sub>4b</sub>	MO→OLC→ECP	LCSDGs -1SD	0.066	Supported
	MO→OLC→ECP	LCSDGs Mean	0.168**	
	MO→OLC→ECP	LCSDGs +1SD	0.251***	
H <sub>4c</sub>	MO→OLC→SP	LCSDGs -1SD	0.111*	Supported
	MO→OLC→SP	LCSDGs Mean	0.231***	
	MO→OLC→SP	LCSDGs +1SD	0.338***	

Environmental Sustainability Performance=ENP, Economic Sustainability Performance=ECP, Social Sustainability Performance=SP, Leadership Commitment to SDGs=LCSDGs, Organizational Learning Capability=OLC, Mindful Organizing=MO, Standard Deviation=SD, \* $\alpha=0.05$ , \*\* $\alpha=0.01$ , \*\*\* $\alpha=0.001$

Source: Authors

## Data Collection Instrument

### Sustainability Performance

#### Environmental Sustainability Performance (Asadi et al., 2020; Wang, 2019)

ENP1: Our company's environmental performance has improved over the past five years.

ENP2: The resource consumption, e.g., water, electricity, and gas, has decreased during the last three years.

ENP3: The company has improved environmental compliance (i.e., emissions, waste disposal)

#### Economic Sustainability Performance (Li, 2014)

ECP1: The company has decreased the cost of energy consumption.

ECP2: The company has improved capacity utilization.

ECP3: The company has decreased the cost of waste treatment.

ECP4: The company has decreased penalties for environmental accidents.

#### Social Sustainability Performance (Asadi et al., 2020; Wang, 2019)

SP1: Customer satisfaction has increased during the last three years.

SP2: Customers' motivation has increased during the last three years.

SP3: The company provides several societal benefits.

#### Mindful Organizing (Ndubisi & Al-Shuridah, 2019)

MO1: This company spends time identifying activities we do not want to go wrong.

MO2: When handing off an activity to an employee, we usually discuss what to look out for.

MO3: We discuss alternatives to our normal work activities.

MO4: We have a good "map" of each other's talent and skills.

MO5: We talk about mistakes and ways to learn from them.

MO6: When errors happen, we discuss how we could have prevented them.

MO7: When attempting to solve a problem, we take advantage of the unique skills of our colleagues.

#### Organizational Learning Capability (Jerez-Gomez et al., 2005)

OLC1: Employee learning capability is considered a key factor in this firm.

OLC2: The managers frequently involve their staff in important decision-making processes.

OLC3: All parts of this firm (departments, sections, work teams, and individuals) are well aware of how they contribute to achieving the overall objectives.

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3 OLC4: All parts that make up this firm are interconnected, working together in a coordinated  
4 fashion  
5

6 OLC5: This company promotes experimentation and innovation as a way of improving the  
7 work processes.  
8

9 OLC6: Employees have the chance to talk among themselves about new ideas, programs, and  
10 activities that might be of use to the firm.  
11

12 OLC7: In this company, experiences, and ideas provided by external sources (advisors,  
13 customers, training firms, etc.) are considered a useful instrument for learning.  
14

15 OLC8: Errors and failures are always discussed and analyzed on all levels.  
16

17 OLC9: This company follows up on what other competitors are doing, adopting those  
18 practices and techniques it believes to be useful and interesting.  
19

20  
21 **Leadership Commitment to SDGs (Ojo & Fauzi, 2020)**  
22

23 LCSDG1: The top management of my company is committed to the achievement of SDGs.  
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25 LCSDG2: My company's efforts to contribute in SDGs receive full support from top  
26 management.  
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28 LCSDG3: My company's strategies for the achievement of SDGs are driven by top  
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