

Article

Responsible Leadership and Sustainable Development in East Asia Economic Group: Application of Social Exchange Theory

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Abstract: This study aimed to investigate the integrated relationship of responsible leadership, knowledge sharing, and sustainable performance, drawing from social exchange theory. Data from 264 employees of manufacturing firms in China were collected using online survey forms, exhibiting a response rate of 52.80 percent. Subsequently, the partial least square-structural equation modelling (PLS-SEM) was applied to examine responsible leadership's direct and indirect effect on sustainable performance. Current empirical evidence revealed that responsible leaders influence sustainable performance significantly among these firms. Moreover, knowledge sharing has partially mediated the link between responsible leadership-sustainable performance. Overall, the present study contributed to the responsible leadership theory and enriched the literature on sustainable development, where it was found that responsible leaders play a critical role in the latter. Policymakers and practitioners in organisations should take the initiative in fostering specific leadership training and knowledge sharing activities. Accordingly, several recommendations were suggested to policymakers, in which strong leadership is considered the primary role behind several organisational aspects. These aspects include success, knowledge, and information, encouraging sustainable development goals.

Keywords: sustainable leadership; knowledge management; sustainable development; large manufacturing firms; leadership theories; Asia



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1. Introduction

Political instability, technological development, economic integration, and climate change can severely affect human lifestyle. In organisations, this predicament is exasperated by external pressure from the government, public and NGOs, creating the intention to concentrate on the environment by adopting sustainable features [1–3]. Notably, sustainable development is a critical issue for businesses under environmental uncertainty [4], and countries from the East Asia Economic Caucus (EAEC) are grappling with this issue. These countries possess significant sustainable development goals, though they are hindered by the manufacturing sector [5]. Accordingly, the sustainability factor in these regions is critically debated due to energy-intensive carbon emissions from the manufacturing sectors, which severely affect economic growth and the environment [6].

Furthermore, high pollution and carbon-emitting industries affect the environment, resulting in poor air quality in various EAEC regions. Thus, initiative steps must be addressed to stimulate sustainable development priorities and economic success. These steps include decision-making in sustainability adoption, followed by a sustainable development plan and its strategy for long-term implementation [7]. A successful strategy for sustainable development is highly dependent on the policymakers (leaders) [8,9]. Hence, the research focus is redirected by the sustainable development efforts on social and economic issues on a global scale [10].

In sustainable development, organizations consider environment as an integral part of their business activities and offer a win-win solution for the planet, society and themselves [7]. Sustainable performance is defined as the performance in all aspects and for all stakeholders, and it is based on three dimensions, namely social performance, economic performance and environmental performance [11]. Most studies in the extant literature evaluated the impact of sustainable performance on various factors: entrepreneurial leadership [12], sustainable leadership [13–15], authentic leadership [16], and ethical leadership [17]. Others include servant leadership [18], transformational leadership [19,20] and value-based shared leadership [21]. Nevertheless, because there are scant studies on the leadership-sustainable performance relationship [19], emphasis must be given to exploring the mechanisms exhibited in this link [7].

Organisational policies can be enhanced by a responsible leader [22] who promotes ethical, value-based activities, fostering economic, social, environmental, and sustainable development [23]. Previous studies claimed that responsible leaders are the vital driver of organisational performance [24,25], ethically inspiring employees via motivation, communication, and empowerment [26]. This idea increases their motivation to accomplish their professional goals, nourishing responsible development and positive changes [25,27]. These leaders promote sharing valuable information and sustainability value to adopt sustainable practices, which sustain long-term economic, financial, and environmental performance [8,28]. Therefore, the present study aims to examine the responsible leadership effect on the sustainable performance of manufacturing firms in China.

In achieving the objectives of sustainable performance [29], skilled employees must mutually assist each other (e.g., helpful initiatives) via the exchange of knowledge. Responsible leadership and knowledge sharing complement each other and exhibit equal weightage for organisational success [24]. Previous studies in knowledge management concluded that these two factors are crucial in employees' behaviours within a work environment [30]. Knowledge sharing measures the extent to which employees possess positive feelings and are willing to share their knowledge [31]. These practices enable organisations to leverage their employees' knowledge base to develop their businesses [32,33], signifying its positive impact on sustainable performance.

Previous studies confirmed that the social exchange theory is a valid concept, positing knowledge sharing as a process for leaders to spur performance [24,34]. In social exchange, leaders generally motivate employees to accomplish their mutual goals [35]. The social exchange theory claims that knowledge sharing, based on social reciprocity, is crucial to enhancing organisational performance [36]. For instance, employees can synthesise knowledge in a working environment, which is crucial to enhancing their sustainable potential [37]. However, suppressing knowledge may negatively influence their performance [38]. Thus, responsible leadership becomes a vital predictor to share knowledge regarding sustainability and adopt sustainable performance [22].

Sustainable knowledge and practices are the primary sources of sustainable economic and environmental output [39]. Therefore, the current research aims to investigate the indirect impact of responsible leadership on sustainable performance through knowledge sharing. Among the members of EAEG, China, for instance, delivers a substantial weightage to its table [40]. The country is considered the emerging world business hub with the most substantial market [41]. Correspondingly, China's approximately 39 million small and medium enterprises (SMEs) are critical economic-drivers and are also viewed as the country's backbone [42].

Past studies reported insufficient research on sustainable development among SMEs compared to large manufacturing firms [19,43,44]; thus, the current study investigated employees of SMEs in China. Accordingly, this study delivers three contributions to the literature. Firstly, the literature is theoretically enriched by assessing the mediating role of knowledge sharing on the relationship between responsible leadership-sustainable performance. Secondly, the research gap is filled via empirical evidence on the indirect impact of responsible leadership on sustainable performance, achieved via knowledge

sharing. Finally, this study illuminates the role of specific leadership and sustainable development among EAEG countries, specifically China.

The structure of the current study is as follows: Section 2 explains the proposed hypotheses based on the theoretical background. Section 3 elucidates the methodology related to current research objectives. Next, Section 4 offers empirical evidence of this study. Finally, Section 5 presents a discussion and conclusion for this research.

2. Hypotheses Development

2.1. Responsible Leadership and Knowledge Sharing Practices

Effective knowledge management significantly relies on the leadership style, where its implementation varies vis-à-vis the adopted leadership style [45]. Organisations persistently seek effective leadership [46], ensuring sustainable solutions to their issues and ultimately prosper and progress in business [47]. These leaders promote creative thinking via motivation and inspire their team to work toward innovation, a critical aspect of organisational performance [48]. In essence, responsible leaders form the social norms in nurturing responsibility [38], increasing the coordination level among employees to achieve specific goals [49].

Employees will perform beyond their duty to support others, especially in exemplary leadership [50], where such initiatives are strongly influenced by the management style [15]. Past studies reported the positive impact of responsible leadership on knowledge management, organisational learning, and employee performance [47,51–53]. Therefore, the following hypothesis is developed:

Hypothesis 1 (H1). *Responsible leadership significantly influences knowledge sharing.*

2.2. Knowledge Sharing and Sustainable Performance

Knowledge is considered an invaluable resource that fosters organisational growth [54]. The knowledge-sharing practices enable organisations to allocate their resources effectively [32]. Knowledge sharing practices revolve around knowledge generation, integration, and absorption [55]. The sustainable performance of many firms depends on their knowledge generation, integration ability, and intellectual know-how [54,56]. Effective knowledge management practices ensure consistently high performance among firms [57,58]. Past studies have also claimed the substantial positive role of knowledge sharing in sustainable development in any sector [59]. Knowledge heterogeneity is also a vital source of competitive advantage and augmenting sustainable performance [60]. Employee knowledge sharing practices magnify the dynamic capabilities of the firms to deliver things sustainably [61]. Based on the above discussion, the following hypothesis is developed.

Hypothesis 2 (H2). *Knowledge sharing significantly influences sustainable performance.*

2.3. Knowledge Sharing as a Mediator

Knowledge exchange management allows employees and stakeholders to accomplish their mutual goals [29], though its integration into business processes is futile without efficient executive support [39]. Thus, effective leadership becomes a crucial factor for companies to successfully implement knowledge management [62,63], ensuring long-term sustainability in the social, environmental, and economic well-being. This idea can be realised by transferring valuable knowledge effectively and making quality strategic decisions [64,65].

Responsible managers and knowledgeable employees are essential tools for a successful business [28]. Generally, employees are intensely driven by the exemplified leaders [25] as they create an ethical work environment [38], which is crucial for knowledge sharing. In this case, these leaders can facilitate employees with team building, energy, shared vision, and meaningful relations with stakeholders [66]. This idea enables employees to

openly articulate their opinions and feedback in addressing sustainability issues in their jurisdiction [67]. Furthermore, high-morale leaders exemplifying ethical behaviour [68] spurs a psychologically conducive work environment, promoting knowledge sharing [69].

Leaders must consistently promote knowledge integration to solve issues at the organisational level [70]. The responsible attributes for sustainable development are crucial to spurring sustainable activities at the employee level [71]. Consequently, these factors stimulate idea generation and novelty among employees, improving their performance [72]. Previous studies reported a significant impact of knowledge management on the firm's performance, comprising innovation [7,42], organisational performance [73], sustainable activities [74], and employee creativity [75]. These findings encourage employees to integrate their knowledge; thus, the following hypothesis is developed:

Hypothesis 3 (H3). *Knowledge sharing significantly mediates the relationship between responsible leaders and sustainable performance.*

Based on the above literature review and development of the hypotheses, the following research framework is drawn (See, Figure 1).

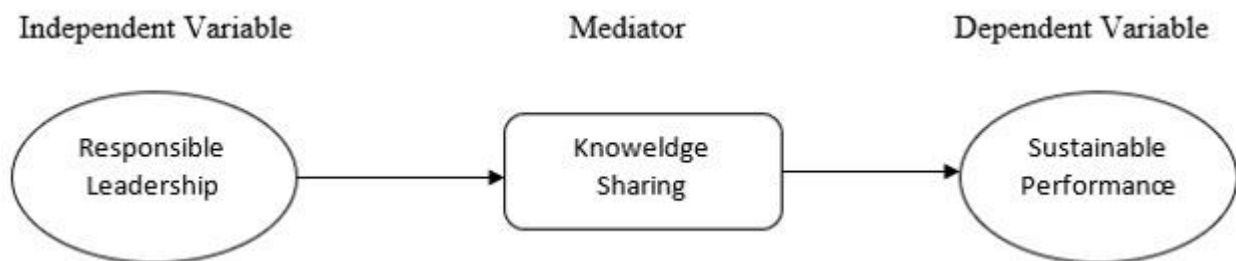


Figure 1. Research framework.

3. Research Methodology

3.1. Context, Sample, Data Collection

The current research considered the vital position of China in the EAEC group [6] and the scant studies on SMEs in sustainable development [42]. Thus, the SMEs in China were submitted as the study's population. Generally, countries define SMEs differently based on the number of employees, annual turnover, and capital. However, in China, they are defined based on the number of employees, up to 2000, 300 million Yuan annual income, and total assets of less than 400 million Yuan [76]. This study adopted the cluster sampling approach due to several factors, i.e., China's substantial market, time and financial constraints. This approach allows the researcher to collect data from SMEs' employees in the top tier cities: Shanghai, Beijing, Shenzhen, and Guangzhou.

Past studies have reported 35.70% as the average response rate in social science research [32,77]. Moreover, to calculate the minimum sample size, we also ran the G*Power application on the basis of two predictors, 0.80 as significant power and 0.15 as effect size [78], which mandated 107 as minimum responses in the current study. In order to enhance the quality of data, we translated the survey form into mandarin. We adopted a triple translation protocol to translate the survey form from English into Mandarin. To ensure the face and content validity of the questionnaire, we accessed one language expert from Beijing Foreign Studies University and two practitioners from SMEs.

In the study, the authors utilised their relations to collect data from the employees and top management via an online survey form. Next, this study incorporated screening questions to ensure that the employees have a minimum of five years' experience. Hence, this idea validates the information reliability of the SMEs' strategic planning and policies. The survey comprised four sections: responsible leadership, knowledge sharing, sustainable performance, and the participants' demographic information. In this research, the data collection process lasted for three months, i.e., from October to December 2021. However,

only 264 responses were acquired out of 500 employees from the four cities, exhibiting a response rate of 52.80%. Moreover, there was absence of any incomplete and invalid responses. Accordingly, we retained these 264 responses for further analysis.

3.2. Measures

In this study, all variables were measured based on a five-point Likert scale, ranging from “5 = strongly agree” to “1 = strongly disagree”. The measurement items of the continuous variables were taken from the previous studies. Based on Cameron’s (2005) framework, the study measured the responsible leadership variable using the five-items scale [77]. Next, the four-measurement items were utilised to examine knowledge sharing, while the 15-items measurement scale was employed to quantify sustainable performance. These measurements were derived from the studies of Lin and Hsiao (2014) and Iqbal et al. (2018), respectively [78–80]. Accordingly, the study considered sustainable performance a second-order construct, where social, ecological, and economic performance is the first-order dimension. The survey items of these three continuous variables and demographics information are presented in the Appendix A at the end of manuscript.

4. Results

4.1. Data Screening

Data screening must be conducted before the data analysis as it reveals any missing values, outliers, data normality, and common method bias. On this account, this study employed online surveys to collect data and marked it mandatory to check against every item. The data set is free from outliers, provided that the Z-score values are less than 3.29 [81], and the absence of a more excellent value greater confirms the non-existence of outliers. This study examined all continuous variables’ skewness and kurtosis values to assess the data normality. The skewness values of responsible leadership, knowledge sharing, sustainability, social, environmental, and economic performance were between 1.395 and 0.297, which are below ± 3 [82]. Hence, the dataset in the current study is normal.

The data collected from a single source may raise bias in the empirical findings; thus, several methods check for potential biasness in the dataset. These methods include Harman’s single factor test [83], marker variables [84] and correlation matrix procedures [85]. Recent studies recommended the marker variable method among these approaches because of its higher validity and reliability [86]. Meanwhile, the attitude was regressed against each independent variable: responsible leadership and knowledge sharing to examine the common method bias. Based on Malhotra et al.’s (2017) criteria [87], the changes in R-squared values were considered, revealing that the changes are less than 10% with the inclusion of attitude. Hence, this study is free from any bias.

4.2. Demographic Analysis

The demographic analysis showed that male participants ($n = 167$, 63.26%) dominate in this study compared to females ($n = 97$, 36.74%). Furthermore, most participants were aged between 25–35 ($n = 153$, 57.95%) and possessed a bachelor’s degree ($n = 159$, 60.23%). Meanwhile, 137 participants acquired between 5–10 years of experience, followed by 73 participants with 11–15 years of experience. Notably, Shanghai ($n = 99$, 37.50%) presented the highest participation, whereas the least was from Guangzhou, which is 37 (See Table 1).

Table 1. Demographic Analysis.

Categorical Variables	Frequency	Percentage	Valid Percentage	Cumulative Percent
		Gender		
Female	97	36.742	36.742	36.742
Male	167	63.258	63.258	100.000
		Age		
<25	25	9.470	9.470	9.470
25–35	153	57.955	57.955	67.424
36–45	72	27.273	27.273	94.697
46–55	11	4.167	4.167	98.864
>55	3	1.136	1.136	100.000
		Education		
PhD	6	2.273	2.273	2.273
Master Degree	92	34.848	34.848	37.121
Degree	159	60.227	60.227	97.348
High School Certificate	7	2.652	2.652	100.000
		Experience		
<5 Years	35	13.258	13.258	13.258
5–10 Years	137	51.894	51.894	65.152
11–15 Years	73	27.652	27.652	92.803
16–20 Years	14	5.303	5.303	98.106
>20 years	5	1.894	1.894	100.000
		Business Location		
Beijing	51	19.318	19.318	19.318
Shanghai	99	37.500	37.500	56.818
Shenzhen	77	29.167	29.167	85.985
Guangzhou	37	14.015	14.015	100.000

4.3. Descriptive Statistics

All continuous variables were measured based on the five-point Likert scale in this study. Any variable measured exhibits low, moderate, and high presence on the five-point Likert scale, given that its mean value is ≤ 2.99 , between 3–3.99, and >4.00 [88]. Based on the findings, the mean value of knowledge sharing is 3.921, below 3.99, signifying a moderate presence of knowledge sharing practices among SMEs employees in China. Additionally, other mean values are above 4.99, including responsible leadership ($M = 4.128$), sustainable performance ($M = 4.266$), and its three dimensions, namely social performance ($M = 4.324$). This list is extended to economic performance ($M = 4.335$) and environmental performance ($M = 4.139$) (See Table 2). Therefore, this analysis revealed high-level practices of these variables among China's SMEs.

Table 2. Descriptive Analysis.

Construct	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Responsible Leadership	4.128	0.689	−1.395	0.151	4.242	0.300
Knowledge Sharing	3.921	0.935	0.297	0.151	2.067	0.300
Social Performance	4.324	0.726	2.033	0.151	11.474	0.300
Environmental Performance	4.139	0.699	0.443	0.151	1.765	0.300
Economic Performance	4.335	0.729	1.689	0.151	9.465	0.300
Sustainable Performance	4.266	0.596	0.443	0.151	1.732	0.300

4.4. Analytical Strategy

The current research framework focuses on the prediction-oriented approach and comprises mediators, followed by dependent and independent variables; thus, it is complex. According to Hair et al. (2017), the prediction orientation and complexity of the model are valid reasons to adopt partial least squares- structural equation modelling (PLS-SEM) as

compared to the covariance-based structural equation modelling (CB-SEM) [89]. Considering the recommendations in past studies [90,91], we adopted this approach to examine the integrated relationship of responsible leadership, knowledge sharing, and sustainable performance among China's SMEs. The PLS-SEM evaluates both the measurement model and the structural model, but it is a prerequisite for evaluating the measurement model before conducting path analysis.

4.5. Measurement Model Analysis

The present study investigated the reliability and validity of predictors and constructs through the measurement model analysis, including factor loadings, composite reliability, and Cronbach's alpha. The acceptable indicator reliability via factor loading value should be greater than 0.50 [92]. However, any value below 0.40 is acceptable if the average variance extracted value is more significant than 0.50 [86]. Table 3 shows that the values of all items are more significant than 0.50, indicating acceptable indicator reliability.

Table 3. Results of Composite Reliability and Convergent Validity.

Construct	Items	Loadings	α	CR	AVE
Responsible Leadership	RL1	0.783	0.898	0.925	0.711
	RL2	0.806			
	RL3	0.886			
	RL4	0.858			
	RL5	0.878			
Knowledge Sharing	KS1	0.916	0.883	0.908	0.713
	KS2	0.836			
	KS3	0.888			
	KS4	0.726			
	KS5	0.822			
Environmental Performance (EnP)	EnP1	0.807	0.797	0.862	0.559
	EnP2	0.836			
	EnP3	0.674			
	EnP4	0.614			
	EnP5	0.782			
Economics Performance (EP)	EP1	0.567	0.889	0.896	0.638
	EP2	0.784			
	EP3	0.848			
	EP4	0.914			
	EP5	0.835			
Social Performance (SP)	SP1	0.871	0.936	0.951	0.796
	SP2	0.921			
	SP3	0.912			
	SP4	0.902			
	SP5	0.853			
Sustainable Performance	EP	0.767	0.843	0.850	0.654
	SP	0.787			
	EnP	0.868			

Internal consistency reliability is evaluated based on Cronbach's alpha and composite reliability (CR), which shows acceptable values greater than 0.70. Similarly, other Cronbach's alpha values presented greater than 0.70, including responsible leadership ($\alpha = 0.898$), knowledge sharing ($\alpha = 0.883$), environmental performance ($\alpha = 0.797$), and economics performance ($\alpha = 0.889$). Others include social performance ($\alpha = 0.936$) and sustainable performance ($\alpha = 0.843$) (See Table 2). Meanwhile, the CR values of continuous variables are between 0.850 and 0.925, which disregarded any values below 0.70 (See Table 3). Thus, all continuous variables exhibited acceptable internal consistency.

Construct validity revolves around convergent and discriminant validity, where the former requires values of factor loadings greater than 0.40 and AVE greater than 0.50 [89]. In this study, several constructs presented AVE values greater than 0.50, denoting acceptable

convergent validity. Accordingly, these constructs are: responsible leadership (AVE = 0.711), knowledge sharing (AVE = 0.713), environmental performance (AVE = 0.559), economics performance (AVE = 0.638), social performance (AVE = 0.796), and sustainable performance (AVE = 0.654) (See, Table 3). Furthermore, the discriminant validity was assessed for the constructs using the Fornell-Larcker criterion and Heterotrait-Monotrait Ratio (HTMT). The former method confirms the discriminant validity, considering that the construct's square root of AVE values is greater than its inter-construct correlation values [93].

Table 4 displays that the square root of AVE of all constructs is more significant than their inter-construct correlations values, demonstrating acceptable discriminant validity. Contrastingly, Heterotrait-Monotrait Ratio (HTMT) requires values of all ratios below 0.85 [94], where the discriminant validity of all constructs are proven as all values were below 0.85.

Table 4. Fornell-Larcker Criterion.

Construct	1	2	3	4	5	6
Economic Performance	0.799					
Environmental Performance	0.770	0.748				
Knoweldge Sharing	0.223	0.446	0.844			
Responsible Leadership	0.391	0.452	0.373	0.843		
Social Performance	0.273	0.440	0.815	0.414	0.892	
Sustainable Performance	0.767	0.668	0.728	0.522	0.787	0.809

4.6. Structural Model Analysis

The structural model was assessed through 5000 subsamples using bootstrapping through Smart PLS. The analysis demonstrated that a responsible leader significantly influences knowledge sharing ($\beta = 0.373$, $\rho < 0.000$) (See Table 5); therefore, hypothesis H1 is accepted. Additionally, knowledge sharing influences sustainable performance ($\beta = 0.728$, $\rho < 0.000$) among Chinese SMEs; thus, hypothesis H2 is supported.

Table 5. Hypotheses Testing.

Hypothesis	β	S.D	t-Value	p-Value	LLCI	ULCI
Responsible Leadership -> Knoweldge Sharing	0.373	0.104	3.568	0.000	0.181	0.583
Knoweldge Sharing -> Sustainable Performance	0.728	0.036	20.000	0.000	0.638	0.785
Responsible Leadership -> Knoweldge Sharing -> Sustainable Performance	0.271	0.086	3.155	0.002	0.129	0.464

Hypothesis 3 posits that knowledge sharing significantly mediates the responsible leadership-sustainable performance relationship. The indirect effect of responsible leadership on sustainable performance is significant and positive ($\beta = 0.271$, $\rho < 0.005$). This link is a product of the direct effect of responsible leadership on knowledge sharing ($\beta = 0.373$) and knowledge sharing on sustainable performance ($\beta = 0.728$) (See Table 5). In other words, knowledge sharing significantly mediates the impact of responsible leadership on sustainable performance, supporting hypothesis H3. Regarding mediation analysis, past studies suggested examining the complete and partial mediation, specifically after establishing the mediator between the independent and dependent variable [95]. Accordingly, partial mediation is present if the direct and indirect effects are significant [96] and is complementary provided that both effects possess identical signs; otherwise, it is regarded as competitive [97].

An indication of complete mediation provided an insignificant direct effect and a significant indirect effect. In this study, the direct and indirect effects are found positive and significant, implying the presence of complementary partial mediation. Thus, knowledge sharing mediates a part of the total impact of responsible leadership on sustainable performance among SMEs in China.

5. Discussion and Conclusions

This study aimed to investigate knowledge sharing as a mediator for the relationship between responsible leadership and knowledge sharing, predicated on the social exchange theory. The empirical evidence confirms the responsible leadership's indirect effect on sustainable performance through knowledge sharing among SMEs in China. Furthermore, the findings claim the significant direct effect of responsible leadership on knowledge sharing and the latter on sustainable performance among China's SMEs. These findings are elaborated as follows: In this study, the first hypothesis, H1, posits that responsible leaders significantly influence knowledge sharing practices among SMEs employees in China. The current findings confirm the significant positive impact of responsible leadership on knowledge sharing practices, which is consistent with the conclusions drawn by past researchers.

The extant literature has proved the positive effect of knowledge sharing on various leadership factors, including empowerment [98], ethics [99], servant [100], authenticity [101], and respectfulness [102]. For instance, a study in the United States reported that team-focused transformational leaders significantly influence knowledge sharing among employees in high-tech firms [103]. Moreover, sustainable leaders were found to develop a psychologically safe workplace [69] and to empower employees [32], which are strong determinants of knowledge sharing. Based on these findings, the hypothesis H2 is supported, claiming that employee knowledge sharing affects sustainable performance.

Principally, leaders spur knowledge sharing activities, driving performance [104], and multiple studies indicate its impact on multiple aspects. These aspects are based on performance, comprising organisational [105], innovation [106,107], project [108], and team-based [109]. Others include learning alliances [110] and operational performances [56,111]. For instance, an investigation was conducted on research and development (R and D) firms in cross-border R and D partnership innovation projects. The findings revealed that the individual-level knowledge sharing behaviours positively affect the firms-level capabilities for strategic innovation [112].

Establishing the social exchange theory, hypothesis H3 claims that knowledge sharing mediates responsible leadership and sustainable performance link. Hence, H3 is supported as the analysis concluded the partial indirect effect of responsible leadership on sustainable performance through knowledge sharing among China's SMEs. These results aligned with previous findings [56,61,113,114]. Similarly, past studies confirmed that the mediating effect of knowledge sharing is on the correlations between transformational leadership, employees efficiency [115], and innovative behaviour [61].

A study was conducted among SMEs from the Association of Southeast Asian Nations (ASEAN) region. The findings from the study reported that psychological safety exhibited a mediating effect on the sustainable leadership-sustainable performance link [69]. Similarly, another study in India reported a significant indirect effect of servant leadership on work performance through knowledge sharing among employees from the public sector [114]. Finally, knowledge sharing was found to mediate the relationships between leaders' supportive behaviour-employees creative performance [116] and leader-member exchange-performance [113].

5.1. Theoretical Implications

The current research possesses three theoretical contributions. First, this study unraveled the relationship of responsible leadership with knowledge sharing and that of knowledge sharing on sustainable performance through the lens of sustainable development, which enriched literature in the arena of knowledge management and sustainability. Previously, academicians have developed a leadership-sustainable performance relationship on the upper echelon theory [15,32,71], which only focuses on their strategy as the best tool to enhance sustainable performance. Contrary to these studies, leaders always follow specific processes to execute their vision and mission. Current findings confirm that responsible leaders positively influence knowledge-sharing practices by introducing a

shared vision, adopting a servant leadership approach, modeling as a change agent, and playing the role of stewardship [36].

Second, this study has also concluded a positive impact of knowledge-sharing practices on sustainable performance. The knowledge sharing practices enable organisations to reconfigure their internal resources and capabilities to tackle external market and environmental changes [117]. Till now, there has been a scarcity of its application in relation to sustainable performance [55]. Sustainable development requires the embeddedness of explicit knowledge and implicit knowledge, and the understanding of internal and external circumstances to effectively balance economic, social, and ecological performance [56]. The enhanced knowledge-sharing practices enable firms to trade off the interests of diverse stakeholders. Third, contributions include enrichment of the literature on social exchange theory. This idea was accomplished after examining the indirect effect of responsible leadership on sustainable performance through knowledge sharing.

5.2. Practical Implications

The current research has certain practical implications for owners, practitioners, and policymakers. First, organisations should promote responsible leadership practices in order to accomplish sustainable development goals. The current study explores the enactment of responsible leadership from a wider perspective. Top management can foster responsible leadership practices in their authority by introducing shared vision, and goals, working as a change agent, understanding the needs of stakeholders, communicating effectively and openly, and adopting a service-oriented approach. Organizations should work on capacity building at both the organizational and societal levels to promote responsible leadership practices. By working on capacity building, organizations can alter the employee mindset and offer the necessary knowledge, which is useful to accomplish sustainable development goals. Second, responsible leaders promote knowledge-sharing practices. Organizational management should focus on the behaviour displayed by responsible leaders, as it will influence the employee's behaviour. Responsible leaders are well aware of their responsibilities in the context of new challenges such as sustainable development goals; therefore, their integration into an organization will influence the workplace environment. Furthermore, responsible leaders may expedite the employee's working effectiveness and efficiency by offering them an exemplary model and shared vision.

Third, employees and organisational knowledge bases are crucial to gaining sustainable and competitive advantage [8], and this study has emphasised this idea based on social exchange theory. This study concludes that responsible leaders positively enhance sustainable performance through knowledge sharing. It indicates that organisations are highly reliant on knowledge creation, sharing, and integration to reap the benefits of responsible leadership practices in the shape of sustainable performance at the optimum level. The organisations, which underestimate the significance of the knowledge-sharing process, may stay behind their competitors in order to accomplish the sustainable development goals, even in the presence of responsible leadership. Therefore, organisations should holistically review their knowledge management practices within their arena. The organisations also need to focus on cognitive demand, cognitive distance, and relationship management in order to create a conducive environment for knowledge-sharing practices. The organisations should also promote open communication and ideas sharing culture among their stakeholders.

5.3. Limitation and Future Direction

Despite its significant theoretical contributions and practical implications, this investigation is not free from limitations. First, this study only covered the role of knowledge sharing from the perspective of SMEs in China. Hence, future studies must be expanded in different regions to resolve the generalisation issue, facilitating policymakers and practitioners with deeper insight. Secondly, the role of responsible leadership was exclusively examined as an exogenous variable. Previous studies evaluated the leadership impact

from various angles: servant, transformational, sustainable, authentic and ethical. Thus, a comparative study should confirm the most significant role of the specific leadership style in sustainable development.

Thirdly, national culture is significantly related to the organisational outcome of individuals' attitudes and actions [14]. Based on this observation, certain cultural attributes may alter the relationship of specific leadership with organisational and individual level outcomes [117]. Moreover, the working environment in Asian and Western countries is different; hence, future studies must incorporate culture-related variables to explore the leadership-outcome relationship. Finally, since the findings were based on cross-sectional data, the forthcoming works must collect data from multiple sources or employ experiments to exhibit more valid results.

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Appendix A. Survey Form

Responsible leadership

Leaders in our firm demonstrate awareness of the relevant stakeholder claims.
 Leaders in our firm consider the consequences of decisions for the affected stakeholders.
 Leaders in our firm involve the affected stakeholders in the decision-making process.
 Leaders in our firm weigh different stakeholder claims before deciding.
 Leaders in our firm try to achieve a consensus among the affected stakeholders.

knowledge sharing

In our firm, employees share each other's success and failure stories.
 In our firm, employees share know-how from work experience with each other.
 In our firm, employees share each other's know-where and know-whom.
 In our firm, employees share expertise obtained from education and training.

Sustainable performance

Economic performance

Economic performance of your organization is at acceptable level in terms of sales growth.
 Economic performance of your organization is at acceptable level in terms of income stability.
 Economic performance of your organization is at acceptable level in terms of return on investment.
 Economic performance of your organization is at acceptable level in terms of profitability.
 Your organization is providing employment opportunities to you and others.

Social performance

Your organization ensures basic needs for your family.
 Your organization enhances your social recognition in society.
 Your organization improves your empowerment in society.
 Your organization provides freedom and control over the course of your own lifestyle.
 Your organization is concerned about child labour use.

Environmental performance

Your organization uses utilities (e.g., energy and water) in an environmentally friendly manner.
 Your organization produces few wastes and emissions.
 Your organization is concerned about waste management.
 Your organization uses small space to set up and operate business.
 Your organization is concerned about hygienic factors.

Demographics information

Kindly mark your response in the most appropriate box.

Gender

Male

Female

Age

Below 25 years

25–35 years

36–45 years

46–55 years

More than 55 years

Education

PhD

Master

Degree

High School Certificate

Experience

<5 Years

5–10 Years

11–15 Years

16–20 Years

>20 years

Business Location

Beijing

Shanghai

Shenzhen

Guangzhou

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