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The Mediating Role of Knowledge Management in the Relationship Between Social Responsibility and Sustainable Development: Empirical Evidence from HSA Group in a Developing Country

Ebrahim Mohammed Al-Fakih
Dr. Abdulrazaq Mohammed Qaid Almarani

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Ebrahim Mohammed Al-Fakih
Center of Business Administration, Sana'a University, Sana'a 967, Yemen
Ysaaa2019@gmail.com

Dr. Abdulrazaq Mohammed Qaid Almarani
Dr. Department of Business Administration, Faculty of Commerce & Economics, Sana'a University, Sana'a, Yemen
a.almarani@su.edu.ye

Abstract

This study examines the relationship between Social Responsibility, Knowledge Management, and sustainable development in Hayel Saeed Ana'am Group in Yemen. The research aims to explore how social responsibility influences knowledge management processes and contributes to achieving the Sustainable Development Goals. Data were collected using a structured questionnaire administered to 191 participants, and the instrument's reliability and validity were confirmed. The data were analyzed using SPSS 28 and SmartPLS 4.0.5.9. The results reveal that Social Responsibility significantly influences both Knowledge Management and Sustainable Development. Furthermore, Knowledge Management acts as a mediator between Social Responsibility and Sustainable Development. The findings underscore the importance of integrating social responsibility into organizational strategies to enhance knowledge management practices, which in turn drive sustainable development outcomes. The study contributes to the growing body of knowledge on the interconnectedness of these dimensions, providing valuable insights for organizations seeking to improve their sustainability practices through responsible management and knowledge processes.

Keywords: Social Responsibility; Knowledge Management; Sustainable Development.

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Introduction:

Corporate social responsibility (CSR) is a concept that has garnered growing attention across academic and professional literature, as it represents a framework that redefines the relationship between an organization and its social environment toward positive and sustainable engagement. CSR focuses on multiple types of stakeholders, both internal and external to the organization. Therefore, CSR expands the concept of work beyond the traditional framework of jobs, becoming an important means for individuals to discover the true meaning of their professional roles within a framework that goes beyond mere material or profit-driven objectives (Aguinis & Glavas, 2017). In a contemporary business sense, CSR reflects an organization's commitment to operate sustainably (Singh & Yadav, 2023). CSR is emerging as a critical factor in fostering innovative employee behavior, contributing to cleaner production processes, and achieving corporate sustainability goals (Paruzel et al. 2023). CSR has

also demonstrated a positive influence on companies' economic growth, including profitability and company value (Yousefian, et al. 2023).

It is increasingly important for organizations to actively participate in CSR initiatives given their wide-ranging benefits for enhancing a company's reputation, stakeholder relationships, regulatory compliance, and long-term sustainability (Singh & Yadav, 2023). CSR is a multifaceted concept that reflects an organization's commitment to society and the environment; These commitments encompass several dimensions, including environmental, ethical, philanthropic, and economic responsibilities. In practice, a thorough understanding of these dimensions provides a foundational basis for exploring their influence on corporate performance and relationships with stakeholders, as well as promoting sustainable development (SD) (Rubach, 2022). Specifically, CSR involves environmental responsibility, which promotes sustainable practices; ethical responsibility, related to fairness and transparency; philanthropic responsibility, focusing on community engagement and support; and economic responsibility, which integrates these commitments with the organization's financial goals (Singh & Yadav, 2023). Over time, CSR has evolved from a mere voluntary charitable activity to a strategic component rooted in contemporary legal and regulatory frameworks. Legal compliance has become a key component that directly impacts an organization's performance and stakeholder confidence. Recent research highlights that the legal dimension of CSR implementation effectively contributes to enhancing the efficiency of internal operations, raising employee engagement. Research into CSR can help address some of the major challenges facing society, and gaining public acceptance, making legal compliance a strategic tool for reputation management, and enhancing community engagement (Lestari, 2024). Furthermore, CSR research plays an important role in addressing pressing societal challenges, including SD (Aguinis, et al. 2023). CSR and social and economic sustainability are now viewed as key factors in enhancing institutional trust and commitment. They have attracted the attention of researchers and policymakers, as they have shown that all responsibilities, such as economic, legal, ethical, and philanthropic responsibility, as well as economic and social sustainability, have had a positive impact on institutional trust (Tai, 2022). Companies can run responsible CSR programs, provide positive impacts on society and the environment, and support the SD Goals (Indarto et al., 2024).

There are many perspectives on the concept of Sustainable development (SD), but they converge on the fundamental aspects through which it is addressed, which are the so-called pillars of development, represented by the economic, social, and environmental aspects (Al-Kurshomi, 2024, p.13). SD is a popular concept adopted by many governments, organizations, and companies to express the principles underlying their policies and initiatives. This concept reflects the drive to reduce the environmental impact of various projects and activities, while striving to achieve development goals and meet the needs of communities (Andreea & Gabriela, 2020)

Hayel Saeed Anam & Co Group (HAS) is a cornerstone of Yemen's private sector, renowned as one of the country's largest and most enduring family businesses with a legacy stretching back to the mid-20th century, its influence spans multiple industries including trade, manufacturing, services, and banking, setting it apart through both its geographic reach and the diversity of its operations, which have cemented its role as a driving force in Yemen's economy.

Background Studies/Literature Review:

Knowledge management (KM) is a modern concept in management science, and interest in it has increased over the past two decades. This has led to the emergence of numerous definitions of the concept, which vary depending on the specializations and perspectives of researchers. The definitions of KM are numerous, due to the diversity of thinkers, their areas of interest, and their areas of specialization. Some view KM as a business strategy, others as intellectual capital, and a third view the term as a fundamental component of an organization, viewing it as organizational knowledge used to change and regulate the behavior of individual employees and the organization's processes and activities. According to the Oxford Dictionary, knowledge is "information or facts that a person possesses in their mind about something." In philosophy, it is defined as "a broad abstract concept" (Al-Omari et al., 2018, p. 8). Knowledge sharing is one of the most important factors contributing to achieving SD (Atkociuniene & Mikalauskiene, 2019). And defined as "the process of gathering information, making decisions, and taking action in response to the external environment. It includes measures such as flexible management to adapt to changing situations, as well as integrative strategies adopted by organizations to implement self-improvement" (Ma & Sun, 2010, p. 82). Others define KM as "the critical factor that ensures an organization's adaptability and survival in a changing and unbalanced world through the capabilities of information technology (IT) that process data and information, as well as the role of creativity and innovation" (Malhotra, 2000; Mikalauskienė & Atkočiūnienė, 2019). The KM also refers to a set of administrative tasks and activities carried out by individuals, relying on their experience and abilities to deal with exceptional situations faced by the organization as part of its interaction with the surrounding and general environment. This goal is not only to achieve its objectives with high efficiency, but also to ensure the effective continuity of the operations and activities of business organizations and companies (Ibn Lebbad & Nabawiya, 2020). In another definition, the focus is on KM through administrative organizational processes, where KM is as “the processes of planning, organizing, controlling, coordinating, and synthesizing knowledge and all activities related to intellectual capital through personal processes and capabilities and organizational potential, and using it to achieve a positive impact on the competitive advantage that the organization aspires to achieve, in addition to benefiting from its continued sustainability, dissemination, and use by knowledge individuals, computer systems, and networks” (Wiig cited in Kamal & Asohr, 2020).

KM (KM) in any organization aims to maximize its value by helping its human resources innovate and adapt to changes, and in addition, many factors drive organizations to adopt KM practices to manage their capabilities more systematically, and this is because, in today's global market economy, survival is for the smartest, as developments change rapidly, requiring faster and sharper adaptability to survive, and this requires the organization to operate as a single, harmonious body of knowledge, capable of focusing on critical issues, perceiving and learning quickly, and making decisions and acting wisely without hesitation(Wang et al., 2001, p9)

KM (KM) is defined as “the decisive factor that ensures the organization’s adaptation and survival in a changing and unbalanced world through the capabilities of information technology through which data and information are processed, in addition to the role of creativity and innovation” (Malhotra, 2000 cited in Mikalauskienė & Atkočiūnienė, 2019).

Corporate Social Responsibility

Environmental responsibility refers to companies' commitment to operating in ways that preserve the environment and reduce the negative impact of industrial activities on nature. Common measures in this area include reducing pollution, lowering greenhouse gas emissions, limiting the use of single-use plastics, rationalizing water consumption, and reducing waste. It also includes adopting renewable energy sources and using sustainable resources, in addition to initiatives such as tree planting and supporting

environmental research. Ethical responsibility refers to ensuring that an organization operates with integrity and fairness toward all stakeholders, including leaders, investors, employees, suppliers, and customers. Ethical practices include paying fair wages that exceed the legal minimum, ensuring the use of free trade principles in the supply chain, and preventing the exploitation of forced or child labor. Philanthropic responsibility focuses on an organization's active participation in improving society and the world around it, whether through direct donations to charitable and non-profit organizations or establishing charitable funds to support various causes, while ensuring that these activities are consistent with environmental and ethical values. The economic responsibility dimension is concerned with making financial decisions for the organization while taking into account the social and environmental dimensions, so that the ultimate goal is to achieve a sustainable positive impact rather than only seeking to maximize profits (Rubach, 2022).

KM and SD

SD (SD) has become viewed as one of the main ideologies in the development of society, as it requires the concerted efforts and coordination of social, economic, and environmental initiatives within organizations; the identification of many influencing factors; and the establishment of a supportive administrative system (Atkociuniene & Mikalauskiene, 2019). Pais et al. (2023) conducted a systematic literature review on the relationship between KM and SDGs, concluding that there was limited research on this relationship. However, researchers agreed on the necessity of KM in achieving the SD plan and the importance of investing in it, especially in developing countries. While Ayobami et al. (2019) also emphasized the importance of KM in achieving the SDGs, noting that the successful implementation of these SDGs requires global partnerships and enhanced cooperation and knowledge exchange among different countries. This can be achieved by bridging the digital divide between developed and developing countries by supporting and sharing knowledge. Al-Yami & Ajmal (2019) conducted a study to understand the impact of KM processes on operational efficiency and SD in several government institutions in the UA; That study used a three-section questionnaire, first section was devoted to measuring KM, which included six dimensions: knowledge acquisition, knowledge production, knowledge collection, knowledge storage and retrieval, knowledge sharing, and knowledge use. The third section was devoted to measuring SD, the results showed that KM practices had a positive impact on both operational efficiency and SD, furthermore, operational efficiency, as a mediating variable, played an important role in strengthening the relationship between KM and SD, achieving the three pillars of SD also requires integrating sustainability principles into operational processes by enhancing KM practices and leveraging diverse knowledge resources. A study by Widyanti et al. (2024) on two of the largest mining companies in Indonesia revealed that four out of five KM dimensions—knowledge acquisition, knowledge storage, knowledge application, and knowledge creation—had a direct impact on corporate sustainability. It indicated that companies operating in collectivist cultural environments need to take additional measures to promote knowledge sharing, including providing incentives for employees to share their experiences. This also requires fostering a supportive organizational culture, clearly defining expectations, and providing more opportunities for social interaction. While Russ (2021) proposed a conceptual model for SD that focuses on KM and sharing, the concept of KM is analyzed within a tripartite model that highlights the areas of human knowledge and machine data, with an emphasis on learning and decision-making processes, supporting digital systems, and human factors, and proposed integrating the development of new knowledge with contemporary KM within a unified framework.

From the environmental dimension of development, the results of a recent study by Weina & Yanling (2022) indicate that KM practices have a positive impact on environmental

sustainability, environmental awareness, and the use of green technology.

The KM and CSR

Recent literature indicates a complex interaction between the dimensions of CSR (economic, environmental, and social) and KM. The results show that environmental and social CSR are closely related to the knowledge exploration strategy (KM), while economic CSR is significantly related to the knowledge exploitation strategy (KM). The study also demonstrated that economic responsibility indirectly contributes to the development of innovative capabilities through knowledge exploitation, while no similar significant effect was found for environmental and SR through knowledge exploration (González-Ramos et al., 2023).

Recent literature also indicates a close relationship between KM strategies, both exploratory and exploitative, and CSR performance. The results of one study showed that exploratory KM strategies are significantly related to an organization's social and environmental commitments, while exploitative KM strategies are related to economic responsibility objectives. Furthermore, SR is strongly related to product innovation capabilities, while economic responsibility contributes more to the development of operational innovation capabilities. These findings underscore the importance of aligning an organization's strategic direction in KM with its CSR priorities to enhance innovation capabilities by leveraging stakeholder knowledge (González-Ramos, 2023).

The legal dimension is pivotal in understanding and implementing CSR. It is no longer viewed solely as a voluntary activity, but rather as an organizational and strategic component linked to national and international legal frameworks and legislation. Literature indicates that adherence to legal standards in implementing CSR contributes to improving internal operational efficiency, enhancing employee loyalty, and increasing the level of acceptance and trust from society. Legal compliance is also an effective tool in managing corporate reputation and balancing stakeholder requirements with organizational practices. However, the effectiveness of this dimension still faces challenges, including disparate legislation, weak institutional coordination, and limited legal awareness within some organizations. Public policy tools such as mandatory reporting, financial incentives, and the adoption of international standards (such as the GRI) have proven effective in enhancing compliance and achieving a positive impact (Lestari, 2024).

CSR and SD

In light of the rapid global transformations in the areas of SD and CSR, integrating CSR has become an indispensable strategic component of the contemporary corporate structure. CSR has transcended the traditional framework of charitable work to become an effective tool that integrates the objectives of economic growth with the principles of sustainability and social welfare. A recent study indicates that CSR has become an essential part of the corporate value of leading organizations, representing a crucial factor in guiding strategies and enhancing the social and environmental efficiency of corporate activities (Ashurov et al. 2024).

Tian et al. (2025) found positive associations between corporate social responsibility and sustainable development, with the results confirming the effectiveness of each dimension of social responsibility in supporting sustainable development goals.

Recent trends in business practices indicate increasing pressure from stakeholders and policymakers on companies, particularly in the energy sector, to adopt an approach that integrates CSR objectives with the SD Goals. One study has shown that CSR is no longer a practice separate from sustainability, but rather a strategic framework that helps guide investment decisions and achieve a balance between economic performance and environmental conservation. Recent models, such as the "CSR towards the SDGs" index, confirm that implementing clean energy projects is a top priority for CSR in emerging economies, given its direct impact on mitigating global warming and enhancing the efficiency of long-term investments. Furthermore, the success

of CSR in achieving sustainability requires advanced technical infrastructure and a qualified workforce to ensure effective implementation (Dinçer et al., 2023).

Study Hypotheses

H1: SR has a significant positive impact on SD.

H2: SR has a significant positive impact on KM.

H3: KM has a significant positive impact on SD.

H4: KM mediates the relationship between SR and SD.

1.1. Conceptual model

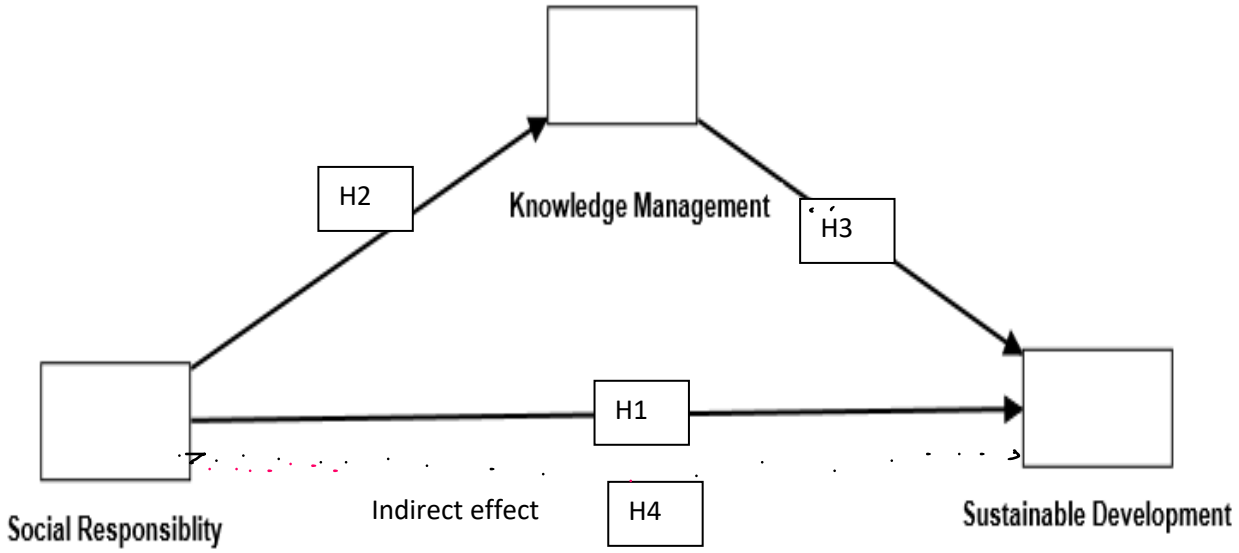

Figure 1 Study conceptual model

Research Design:

1.1. Sample and sampling technique

The study employed a purposive sampling technique, selecting participants based on specific criteria relevant to the research. A total of 191 respondents participated in the study, providing data that contributed to the analysis of the relationships between SR, KM, and SD.

1.2. Data collection

Data for the study were collected using a structured questionnaire, which was distributed electronically to the study sample. The questionnaire was designed to capture relevant information on SR, KM, and SD.

1.3. Measures

A structured questionnaire was developed for data collection, drawing on established measures from prior literature to ensure validity and relevance to the study's objectives. The questionnaire was designed to assess the key constructs of SR, DM, and SD. To ensure its accuracy and clarity, the developed questionnaire was validated by a panel of academic and managerial experts, who reviewed its content and structure. Their feedback helped refine the instrument, ensuring it effectively captured the dimensions of interest and was suitable for the study's target population.

1.4. Reliability of the study measures

Table 1
Scale Reliability and internal consistency

		Cronbach's Alpha
Social Responsibility	Economic Responsibility	.804
	Human Responsibility	.863
	Ethical Dimension	883
	Legal Dimension	.774
Sustainable Development	Economic Dimension	.905
	Social Dimension	.914
	Environmental Dimension	.912
	Technological Dimension	.888
KM	Knowledge Acquisition	.875
	Knowledge Generation	.902
	Knowledge Storage	.882
	Knowledge Application	.916
	Knowledge Sharing and Distribution	.881

As presented in Table 1, the reliability of the study scale, as assessed by Cronbach's Alpha, demonstrates strong internal consistency across all dimensions, with values exceeding the acceptable threshold of 0.70. Dimensions such as Economic Responsibility (.804) and Legal Dimension (.774) indicate good reliability, while Human Responsibility (.863), Ethical Dimension (.883), Technological Dimension (.888), and several knowledge-related dimensions, including Knowledge Acquisition (.875), Knowledge Storage (.882), and Knowledge sharing and Distribution (.881), show high reliability. Furthermore, dimensions like Economic Dimension (.905), Social Dimension (.914), Environmental Dimension (.912), Knowledge Generation (.902), and Knowledge Application (.916) exhibit excellent reliability. These results confirm the scale's consistency and dependability for evaluating the constructs under study.

1.5. Data analysis:

The study's data was analyzed using SPSS v28 and SmartPLS v4.0.9.5, employing a range of statistical techniques to ensure robustness and validity. Cronbach's Alpha was utilized to test the reliability of the scales, confirming internal consistency across the constructs. Additionally, data quality checks were conducted, including assessments for normality, outliers, and missing values, to ensure the integrity of the analysis. Descriptive statistics, such as frequencies, percentages, means, and standard deviations (SD), were used to summarize the sample characteristics and key variables. For hypothesis testing, Hayes' Process (2012) was applied to perform path analysis, enabling the evaluation of direct, indirect, and mediating effects among the study variables.

1.6. Common variance Method (CVM)

To ensure the validity of the responses and rule out potential common method bias, the study applied the single factor test of Harman (Fuchs, 2012). This method examines whether a single factor accounts for the majority of the variance in the data, which could indicate respondent misbehavior or biased responses. The test results confirmed that no single factor dominated the variance, suggesting that common method variance was not a significant issue in the dataset. This validation step strengthens the reliability and credibility of the study's findings.

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2. Results

2.1. Sample characteristics

Table 2
sample characteristics

		N	%
Gender	Female	26	13.6%
	Male	165	86.4%
Education	Less than high school	1	0.5%
	Bachelor's	155	81.2%
	High school	11	5.8%
	Postgraduate	24	12.6%
Age	Less than 30 years	15	7.9%
	More than 40 years	71	37.2%
	From 30 to 35 years	59	30.9%
	From 36 to 40 years	46	24.1%
	20 years or more	41	21.5%
Tenure	Less than five years	35	18.3%
	From 11 to 15 years	40	20.9%
	From 15 to 20 years	34	17.8%
	From 5 to 10 years	41	21.5%

As shown in Table 2, the study sample comprised 191 participants, with 86.4% males and 13.6% females. In terms of education, the majority held a bachelor's degree (81.2%), while 12.6% were postgraduates, 5.8% completed high school, and only 0.5% had less than high school education. Regarding age distribution, 37.2% were over 40 years old, followed by 30.9% aged 30–35 years, 24.1% aged 36–40 years, and 7.9% under 30 years old. Tenure data showed a balanced distribution, with 21.5% having 20 years or more and another 21.5% having 5–10 years of experience. Additionally, 20.9% had 11–15 years, 18.3% had less than five years, and 17.8% had 15–20 years of tenure. These descriptive statistics highlight the diversity and experience of the sample, ensuring its relevance for the study's objectives.

2.2. Descriptive statistics

2.2.1 Social Responsibility

Table 3
Social Responsibility descriptive statistics

	Mean	**SD**
Economic Responsibility	5.5194	.96616
Human Responsibility	5.5372	1.00327
Ethical Dimension	5.7225	.99275
Legal Dimension	5.1780	1.03035
SR	**5.4893**	**.89671**

As presented in Table 3, the analysis of SR dimensions shows that the Ethical Dimension had the highest mean score (5.7225 ± 0.99275), indicating a strong emphasis on ethical practices. This was followed by Human Responsibility (5.5372 ± 1.00327) and Economic Responsibility (5.5194 ± 0.96616), which also scored relatively high. The overall SR dimension had a mean of 5.4893 ± 0.89671, reflecting consistent performance across related areas. The Legal Dimension scored the lowest with a mean of 5.1780 ± 1.03035, suggesting it might be a comparatively less prioritized area. These findings provide insights

into the emphasis on various aspects of SR within the study's context.

Table 4

Knowledge Management descriptive statistics

	Mean	SD
Knowledge Acquisition	5.2084	1.11937
Knowledge Generation	5.3037	1.15437
Knowledge Storage	5.3330	1.06628
Knowledge Application	5.2712	1.06897
Knowledge Dissemination and Distribution	5.3508	1.06676
KM	**5.2934**	**1.01761**

The analysis of KM dimensions in Table 4 reveals that Knowledge Dissemination and Distribution had the highest mean score (5.3508 ± 1.06676), followed closely by Knowledge Storage (5.3330 ± 1.06628) and Knowledge Generation (5.3037 ± 1.15437). The overall KM dimension recorded a mean of 5.2934 ± 1.01761, reflecting moderate to high effectiveness in managing knowledge. Knowledge Application scored slightly lower (5.2712 ± 1.06897), while Knowledge Acquisition had the lowest mean (5.2084 ± 1.11937), suggesting potential room for improvement in acquiring knowledge. These results underscore the balanced performance across KM processes, with a notable strength in dissemination and storage.

2.2.3 Sustainable Development

Table 5

Sustainable Development descriptive statistics

	Mean	SD
Economic Dimension	5.4115	1.05435
Social Dimension	5.3110	1.09767
Environmental Dimension	5.5675	1.05431
Technological Dimension	5.3393	1.06627
SD	**5.4073**	**.97287**

The analysis of SD dimensions shown in Table 5, indicates that the Environmental Dimension had the highest mean score (5.5675 ± 1.05431), highlighting a strong emphasis on environmental sustainability. This was followed by the Economic Dimension (5.4115 ± 1.05435) and the Technological Dimension (5.3393 ± 1.06627), suggesting moderate alignment with economic and technological aspects of sustainability. The Social Dimension scored the lowest among the dimensions (5.3110 ± 1.09767), indicating room for further enhancement in social sustainability efforts. The overall SD dimension recorded a mean of 5.4073 ± 0.97287, reflecting a balanced and consistent focus on sustainable practices across different domains.

2.3. Correlational Analysis

Table 6

Correlational analysis *Correlations*

	Social Responsibility	KM	Sustainable Development
Social Responsibility	1.00		

Knowledge Management	.870**	1.00	
Sustainable Development	.823**	.831**	1.00

**. Correlation is significant at the 0.01 level (2-tailed).

As shown in Table 6, the correlational analysis shows strong and statistically significant positive relationships among Social Responsibility, KM, and SD. A robust correlation exists between SR and KM ($r = .870$, $p < .001$), indicating that socially responsible practices strongly align with effective KM. Similarly, SR is positively correlated with SD ($r = .823$, $p < .001$), highlighting its contribution to sustainability goals. Furthermore, KM and SD are also strongly correlated ($r = .831$, $p < .001$), underscoring the importance of KM in fostering sustainability. These findings emphasize the interconnectedness of these dimensions in achieving organizational excellence.

2.4. Hypothesis testing

The study employed Hayes (2012) Process Macro for testing mediation by adopting path analysis.

2.4.1. Model quality

Table 7 Model Quality indexes

	R-square	f2
MV: Knowledge Management	0.757	0.202
DV: Sustainable Development	0.731	
IV: social responsibility		0.153

As shown in Table 7, the R-squared values demonstrate the significant explanatory power of SR in the model. For KM, an R-square value of 0.757 indicates that 75.7% of the variance in KM is explained by Social Responsibility, highlighting its substantial influence on knowledge-related processes. Similarly, for SD, an R-squared value of 0.731 shows that 73.1% of the variance is accounted for by SR and KM.

In addition, the effect size (f^2) values highlight the contribution of each independent variable to SD, with KM showing a moderate effect size of 0.202, emphasizing its significant role in influencing sustainability outcomes. Similarly, SR also demonstrates a moderate effect size of 0.153, indicating its importance in driving SD, though its impact is slightly less pronounced than that of KM. These findings underscore the complementary roles of both factors in shaping sustainable practices.

2.4.2. Path analysis

Table 8 path analysis

Hypotheses		**path**	**B**	**SD**	**T**	**P**
H1	SR -> SD	Pc	0.892	0.054	16.61	0.000
H2	SR -> KM	Pa	0.987	0.046	21.46	0.000
H3	KM -> SD	Pb	0.452	0.099	4.554	0.000

As presented in Table 8, the analysis reveals that SR has a significant and positive impact on SD. The path coefficient ($B = 0.892$, $SD = 0.054$, $T = 16.61$, $p < 0.001$) indicates that socially responsible practices strongly contribute to achieving sustainability goals. This finding underscores the critical role of incorporating SR into organizational strategies to enhance sustainable outcomes.

Additionally, the results show that SR significantly influences KM, with a path coefficient of (B = 0.987, SD = 0.046, T = 21.46, p < 0.001). This robust relationship highlights the importance of SR in driving effective KM practices, which are essential for organizational success and innovation.

Finally, the analysis confirms that KM significantly affects SD (B = 0.452, SD = 0.099, T = 4.554, p < 0.001). This result emphasizes the pivotal role of KM in fostering SD by ensuring the effective utilization and dissemination of knowledge to address sustainability challenges. All hypotheses are supported, demonstrating the interconnectedness of these key dimensions in the organizational context.

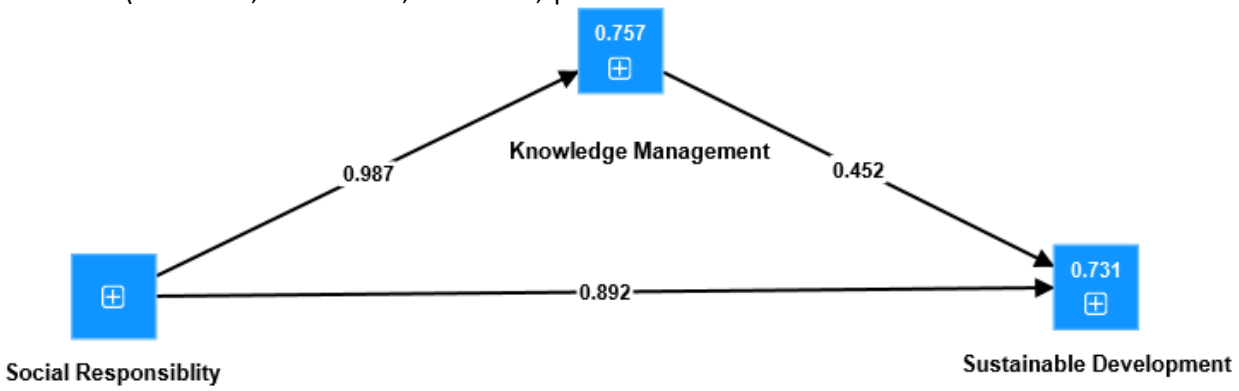

Figure 2 path analysis

2.4.3. Mediation analysis

Table 9 mediation analysis

		path	B	SD	T	P
H4	SR -> KM -> SD	Pa*b	0.446	0.103	4.319	0.000

As shown in Table () and Figure (), the mediation analysis reveals that KM significantly mediates the relationship between SR and SD. The indirect path coefficient (B = 0.446, SD = 0.103, T = 4.319, p < 0.001) confirms that SR indirectly influences SD through its effect on KM.

This finding highlights the importance of KM as a critical mechanism linking SR to SD. It suggests that socially responsible practices not only directly contribute to sustainability but also enhance KM processes, which in turn foster SD outcomes. The significance of the mediation supports the interconnected role of these constructs in achieving organizational excellence and sustainability goals.

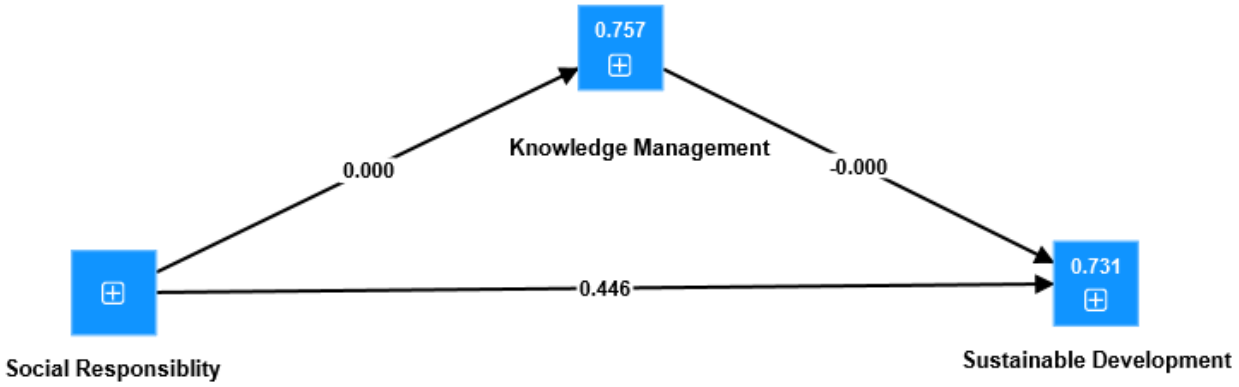

Figure 3 mediaiton analysis

3. DISCUSSION

The results of this study indicate a close relationship between corporate social responsibility, KM, and SD. It was found that implementing CSR practices contributes to enhancing the efficiency of KM processes within organizations, which positively impacts the achievement of SD goals. The results showed that KM plays an effective mediating role between CSR and SD, indicating an indirect effect of CSR through institutional knowledge channels. This finding is consistent with previous literature, as González-Ramos et al. (2023) indicated that CSR, with its economic, social, and environmental dimensions, is closely linked to KM strategies—both exploratory and exploitative—which, in turn, enhance innovation capabilities within organizations. Meanwhile, the results of Widyanti et al. (2024) showed that KM dimensions, such as knowledge generation, storage, and application, had a direct impact on corporate sustainability, particularly in large industrial settings. In the same context, Atkociuniene & Mikalauskiene (2019) explained that knowledge sharing is a key element in achieving the three dimensions of SD. They pointed to the importance of building supportive knowledge systems within organizations to integrate the environmental, social, and economic objectives of SD. While Ayobami et al.'s (2019) study also emphasizes the importance of KM as a key tool in supporting the implementation of the SD Goals by fostering partnerships and knowledge sharing, Al-Yami & Ajmal (2019) concluded that knowledge processes, such as generation, sharing, and use, contribute to increased operational efficiency and SD in organizations. Furthermore, the results of this study indicate that corporate SR not only directly impacts SD but is also an important catalyst for KM, which subsequently reflects on SD. This finding is somewhat consistent with the findings of Lestari's (2024) study, which found that compliance with legal frameworks in implementing SR leads to improved internal operations, increased community trust, and enhanced institutional cohesion—factors that indirectly contribute to long-term sustainability.

Based on the above, the results of this study confirm that organizations seeking to achieve comprehensive sustainability should invest in SR practices not only for their direct impact, but also for their strategic role in activating organizational knowledge, an intangible yet pivotal resource in addressing environmental, social, and economic challenges.

4. CONCLUSION

The study concluded that SR represents an important driver for enhancing KM, which in turn is an effective tool for achieving SD in organizations. The results demonstrated that the relationship between SR and SD is not limited to direct influence but rather extends through KM, which serves as the dynamic link between these two variables.

Accordingly, organizations, particularly those operating in contexts similar to the Yemeni environment, are recommended to integrate SR strategies into their strategic priorities and work to develop their internal knowledge structure as one of the influential factors in the transition towards SD. Understanding the interactions between these three dimensions contributes to building an integrated management model that enhances the effectiveness of institutional performance and ensures its long-term sustainability.

5. LIMITATIONS AND FUTURE RESEARCH DIRECTIONS

Despite the important scientific and applied contributions this study makes, it is not without some limitations that should be taken into consideration. First, the study was limited to a single group of companies in Yemen, which may limit the generalizability of the results to other sectors or countries with different organizational characteristics. Second, this study relied on a questionnaire method to collect data, which may limit the depth of understanding that can be gained through qualitative tools such as interviews or direct observation.

Regarding future directions, the authors suggest conducting further studies that examine organizations in various sectors inside and outside Yemen to examine the extent of variation in impacts due to variations in organizational culture. More complex analytical models could be developed in the future using longitudinal data to understand the temporal changes in the relationship between the three variables. Furthermore, exploring the interactive role of other mediating or moderating variables, such as corporate culture or digital transformation, may open new avenues for a deeper and more comprehensive understanding of the nature of the relationships between social responsibility, KM, and SD.

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Conflicts of Interest:

The authors declare that there is no conflict of interest

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General Guidelines

Everything is double-columns and with single space. Second, margins are 1 inch wide on all sides. Third, there are several headings in bold, left aligned (ending with colon) used throughout to separate different parts of the paper. Fourth, there is (almost always) exactly one space after each punctuation mark. Fifth, add page numbers at the upper right of the paper.

Format of Headings:

Main Headings:

All main headings (Abstract, Introduction, Literature Review, Research Design, Analysis, and Discussion) should be in Bold, left aligned, Calibri with 12 font size.

2nd **Heading**

Indented, bold, Calibri with 12 font size

3rd Heading.

Indented, bold, Italic, Calibri with 11 font size, end with a period.

Citations Style.

For citations, use APA (Edition 6th or above). Remember to cite your sources often in the Introduction and throughout the manuscript. Articles and books are cited the same way in the text, yet they appear differently on the References page. For example, an article by Cronbach and Meehl (2019) and a book by Bandura (2001) are written with the authors' names and the year of the publication in parentheses. However, if you look at the References page, they look a little different. Three other things about citations are important. When a citation is written inside parentheses (e.g., Cronbach & Meehl, 1959), an ampersand ("&") is used between authors' names instead of the word "and." Second, when citing an author's work using quotations, be sure to include a page number. For example, Rogers (1997) once wrote that two important elements of a helping relationship are "genuineness and transparency" (p. 37). Notice that the page number is included here. Unless a direct quote is taken from a source, the page number is not included. Third, if you have more than two authors, the in-text citation would have the first author's last name followed by "et al." (The period allows "al" but not "et" in "et al.") So even though Greenwald, McGhee, and Schwartz all contributed to a 1998 article on the Implicit Association Test, the citation would just be Greenwald et al. (1998).

Table Styles:

Table 1

Sample Table Describing Fake Data, can in one column, caliber, font 11

	Variable A		Variable B	
	M	*SD*	*M*	*SD*
Group 1 (*n* = 100)	32.61	8.95	17.08	5.25
Group 2 (*n* = 100)	33.02	9.17	16.91	5.13

Note. These data were totally made up. They are just presented to give you an idea about how to present in to table

Table 2

Convergent and Discriminant Validity of Depression Scale

Variable	Correlation
Convergent Validity	
Self-Esteem	.44*
Hopelessness	.51**
Discriminant Validity	
Social Desirability	.11
Anxiety	.22

*$p < .05$; **$p < .01$.

Figure 1

A Terribly Obvious Diagram of the Major Sections of a Quantitative Research Paper, center and in one column