Journal of Applied Finance & Banking, Vol. 15, No. 3, 2025, 41-53
ISSN: 1792-6580 (print version), 1792-6599(online)
https://doi.org/10.47260/jafb/1533
Scientific Press International Limited

Environmental, Social, and Governance Sustainability Initiatives in Saudi Arabia: A Review

Roaa Osama Badkook[1]

Abstract

This research is to review the environmental, social, and governance (ESG) adoption and implementation using systematic literature review methodology. Based on the review, it was identified that in organizations, ESG performance is essential for investors, firm managers, and stakeholders. Environmental stability is associated with the practices performed to decrease the impact of businesses or organizations in the surrounding. In addition, environmental stability is associated with a range of initiatives such as resource-efficient production and formulation of eco friendly products. Comparably, social sustainability relates to practices that respect human rights and contribute toward employee, customer, and community welfare. The practices can include investing in community development, having fair labor practices, and developing products and services that have a positive impact on society. Governance sustainability has been enhanced through the Saudi Vision 2030 and Saudi Exchange. Although Saudi Arabia has implemented significant initiatives for ESG sustainability, additional strategies are needed to improve the Performance. It is indispensable for companies and organizations to undertake more sustainable, responsible, and well-governed actions.

JEL classification numbers: M14.
Keywords: Governance sustainability, Social sustainability, Environmental sustainability, Vision 2030.

---

[1] Finance Department, Faculty of Economics and Administration, King Abdulaziz University.

Article Info: *Received:* June 4, 2025. *Revised:* June 25, 2025.
Published online: June 30, 2025.

1. Introduction

Sustainability is an essential concept in all life domains because the practice ensures longevity. In 1987, the United Nations (UN) defined sustainability as fulfilling the present needs without compromising future generations' ability to fulfill their own needs (UN, 2024). Consequently, the sustainable development goals (SDGs) provide a framework for improving lives and mitigating the adverse impact of man-made activities on climate change. Promoting environmental, social, and governance (ESG) practices is among the approaches that have been adopted to promote sustainability. The ESG concept emerged in the early 1990s as a peril management portfolio concept (Boffo and Patalano, 2020). The ESG score is a numerical indicator that was developed and released by Bloomberg, which accounts for roughly 120 performance indicators (Shaikh, 2021). Environments, social, and governance disclosure offer a considerable chance for understanding an organization's non-financial reporting (Albitar et al., 2020). The popularity of ESG disclosure is underpinned by the developing global environmental catastrophe (Firmansyah et al., 2022). It is estimated that by 2021, more than 500 organizations from over 70 countries will adopt ESG reporting (World Economic Forum, 2024). The prevalent adoption of ESG reporting across the world, including Saudi Arabia, can be attributed to the practice's advantages. For instance, an organization can promote legitimacy and trustworthiness among stakeholders by 3 improving its ESG performance (Alregab, 2022). Saudi Arabia is ranked second in the region concerning the adoption and implementation of ESG (Ghardallou, 2022). In Saudi Arabia, the average ESG disclosure score for listed companies was identified as 21.40 out of 100 from 2015 to 2021 (Chebbi and Ammer, 2022). Notably, the score is low, a factor that can be attributed to ESG disclosure still being voluntary in the Kingdom. As one of the most liquid stock exchanges globally, investors' decisions and business practices directly impact the Kingdom's ability to achieve the targets developed by the UN SDGs (Saudi Exchange, 2021). Saudi Arabia's ESG score is moderately negative, which supports the need for the nation to improve its credit impact score (Ehata, 2024). An initiative implemented to improve the score occurred on 29th October 2021, when the Saudi Exchange provided ESG disclosure guidelines to enable listed companies to disclose their performance and foster sustainable growth in Saudi Arabia (Saudi Exchange, 2021). The guidelines outline Saudi Arabia's commitment to providing publicly traded companies and those seeking listing with an awareness of the essence of ESG practices in the Kingdom's financial market, ensuring alignment with the Saudi Vision 2030. Saudi Arabia's Vision 2030 has promoted the Kingdom's continued commitment to sustainability, particularly achieving net neutrality by 2060 (Tajunnisa et al., 2023). As of 2020, there were more than 203 listed issuers on the Saudi Exchange that had a total market capitalization of more than 9.10 trillion Saudi Riyal (SAR) ($2.42 trillion) (Saudi Exchange, 2021). Many of the companies listed on the Saudi Exchange have adopted the principles and practices that promote ESG because the organizations acknowledge the intrinsic value of sustainable growth. Nonetheless, additional initiatives are needed to ensure companies are engaging in ESG (Saudi Exchange, 2021). 4 The Public Investment Fund (PIF) also unveiled its ESG strategy, which is focused on investment in renewable energy, water, and carbon management initiatives (PIF, 2024). The Kingdom of Saudi Arabia is focused on achieving its green agenda to achieve net zero carbon emissions by 2060. A prerequisite is for the Kingdom of Saudi to decrease its carbon IV oxide (CO_2) emission by 278 million tons annually by 2030 (PIF, 2024). The incorporation of ESG into the manner the financial ecosystem operates can help develop an economically efficient and sustainable financial system that contributes towards long-term value creation that benefits the whole Kingdom (Saudi Exchange, 2021). In Saudi Arabia, small and medium enterprises lack awareness of ESG practices and have a limited understanding of the importance of sustainability performance (Shalhoob and Hussainey, 2022). Consequently, Saudi Exchange is responsible for adopting international best practices, promoting market literacy, enhancing investor protection, and fulfilling its socio-economic responsibilities (Saudi Exchange, 2021).

2. Research Importance

The importance of conducting this review is supported by the increased need to gain a comprehensive understanding of the ESG sustainability initiatives implemented in Saudi Arabia. Saudi Arabia is an emerging economy, and the world's largest oil exporter (Workman, 2024). In 2023, Saudi Arabia exported crude oil worth $210.6 billion, but the Kingdom is trying to diversify its economy by developing different sectors such as sports and tourism (Al-Monitor, 2023). Consequently, local and international investors have increasingly become interested in understanding the perils and benefits of their investments in the Kingdom (Adileh, 2022). In Saudi Arabia, the Saudi Exchange provided comprehensive standards for reporting ESG in 2021, which have provided significant improvement through regulations focused on enhancing transparency and disclosure (Institutional Investor, 2022; Saudi Exchange, 2021).

The standards on ESG are vital in achieving Saudi's Vision 2030 goals of diversifying the economic bases and establishing a stable financial sector. Firms in the Kingdom are required to disclose their activities about the society and environment. The advantages of ESG reporting are increased investor confidence, improved brand reputation, increased employee engagement, and significant cost savings (Adileh, 2022). Consistent with Vision 2030, Saudi Arabia aims to develop into a genuinely global country that has a financial network linking possibilities in the Middle East with companies and investors in different global regions (Institutional Investor, 2022). Accordingly, understanding the Kingdom's ESG sustainability is essential.

3. Objective and methodology

The research objective of this review is to provide an understanding of ESG sustainability in Saudi Arabia. The objective was achieved by conducting a systematic literature review (comprehensive search of existing literature). The literature search involved searching electronic databases, specifically EBSCOHost, Elsevier, Wiley, and Springer. The keywords used in the literature search included environmental, social, governance, sustainability, Saudi Arabia, ESG, and Kingdom. Boolean operators AND/OR were applied to create the search phrases that were used in the literature search. The search phrases were environmental AND sustainability, social AND sustainability, governance AND sustainability, ESG, AND Saudi Arabia OR the Kingdom. The findings from the published literature are categorized according to three themes, namely, the impact of ESG in Saudi Arabia, environmental sustainability in Saudi Arabia, social sustainability in Saudi Arabia, and governance sustainability in Saudi Arabia.

4. Impact of ESG on Organizations

Researchers have supported the idea that ESG has both a positive and negative impact on an organization's performance. Particularly, in their study, Ahmad et al. (2021) identified that 6 ESG performance has a positive and negative impact on financial performance. In organizations that have a high ESG score, the financial performance is positive as opposed to those with lower counts (Ahmad et al., 2021). The researchers found that better ESG performance is associated with a decreased likelihood of a stock price crash occurring (Gai et al., 2022). Increased corporate ESG performance helps mitigate stock price crush peril by enhancing green investor attention, enhancing analyst competence, and limiting management behavior (Gai et al., 2022). In another study, Vinodkumar and Alarifi (2020) proposed that ethical investors could use ESG indicators to identify investment value and promote the long term sustainability of the stock market. Corporate ESG disclosure and financial sustainability are positively related (Almubark et al., 2023). The relationship between corporate ESG and financial sustainability is sensitive to the governance regulations implemented and market conditions. There exists a positive association between ESG disclosure and financial performance (Sharawi et al., 2024). Board attributes such as size, ownership, and independence moderate the relationship between ESG disclosure and financial performance. Specifically, board ownership has a positive moderating effect, but the impacts of board size and independence vary based on the financial metric. The results support the importance of ESG disclosure in impacting financial performance that underpins the core role of board governance in enhancing the relationship (Sharawi et al., 2024). Researchers have supported that ESG performance has a positive impact on foreign investment (Alregab, 2022). Companies that have a sustainable ESG benefit financially, strategically, competitively, and reputationally (Shalhoob and Hussainey, 2022). Having good ESG scores is associated with better access to trade credit. It was identified that higher levels of 7 ESG compliance do not impact financial performance in Saudi Arabia (Firmansyah et al., 2022). Rather, ESG decreases or insignificantly impacts financial performance, which tends to discourage companies from investing and reporting. Shalhoob and Hussainey (2022) corroborated the results by arguing that in Saudi Arabia, ESG performance needs significant improvements because it is moderately negative. Board size and its independence positively and significantly affect ESG disclosure (Chebbi and Ammer, 2022). Saudi corporate governance has a positive and significantly moderate impact on board independence and ESG relationships. As such, the enactment of corporate governance can promote ESG disclosure. It was identified that ESG disclosure was positively impacted by both board size and independence, although gender diversity had a limited impact. The increased ESG disclosures may result from these linkages being moderated by corporate governance reforms (Chebbi and Ammer, 2022). ESG disclosure policies have a substantial influence on under- and over-investment levels while also improving corporate efficiency (Kouaib, 2022). Such results are essential for sustainable reporting and development in Saudi Arabia and the wider Middle East. In the context of health care organizations, the government must modify its health policies to account for evolving disease trends, expand state capacity through collaboration and coordination, and strengthen healthcare through partnerships and human resource development (Rahman and Qattan, 2021).

5. Environmental Sustainability in Saudi Arabia

In Saudi Arabia, initiatives under Vision 2030 have been implemented to combat climate change, promote quality of life, and protect the environment (Aldegheishem, 2024; Alyahya et al., 2022; Shalhoob and Hussainey, 2022). In 2019, the Kingdom of Saudi Arabia allocated $28 8 billion to a renewable energy manufacturer and a program that offers loans for clean energy programs (Shalhoob and Hussainey, 2022). Achieving sustainable goals towards effective waste management, the quality of air, and access to green areas are a problem in Saudi Arabia (Aldegheishem, 2024). Comparably, the Kingdom has made significant progress towards achieving affordable housing, urbanization, and sustainable transportation goals (Aldegheishem, 2024). Environmental disclosure is negatively associated with performance because organizations forfeit cash flow, which is diverted to fulfill the needed operations, decreasing profitability. Based on analyzing secondary and primary data for sustainability and business enterprises, Hashmi and Al-Habib (2013) found that Saudi Arabia, a major player in global petroleum production, has demonstrated greater readiness in sustainability and carbon management practices when compared to public sector enterprises. Moreover, ESG practices have a substantial impact on green innovation, but many small and medium-sized enterprises (SMEs) are unaware of these practices and their impact on external influences on sustainable development practices in Saudi Arabia (Alyahya et al., 2022). In a different study, Al-Tit et al. (2019) assessed the important determinants of success for SMEs in Saudi Arabia, which were identified to include personal factors, business characteristics, management factors, environment, capital availability, and business support. Of these, business support was identified as the most important factor (Al-Tit et al., 2019). While entrepreneurial resilience has a major role in sustainable performance, financial literacy promotes both entrepreneurial competency and resilience (Seraj et al., 2022). It was identified that CO_2 emission per capita has a negative effect on the gross domestic product (GDP) per capita, which was statistically significant (Kahia et al., 9 2021). The rise of 1% of per capita CO_2 emissions decreased economic growth by approximately 0.1%. Contrastingly, increased consumption of renewable energy in Saudi Arabia does not significantly impact economic growth (Kahia et al., 2021). The researchers also identified that GDP per capita had the highest contribution towards the increase in CO_2 emissions in the Kingdom. The implication from the findings is that economic growth results in deterioration of environmental quality. The GDP per capita has a statistically significant impact on renewable energy usage. Financial development is a core catalyst for promoting renewable energy production and usage in Saudi Arabia (Kahia et al., 2021). Financing is not only a precondition for renewable energy in the Kingdom, but core in the prevailing research phase and development to promote economic viability, foster stakeholders' involvement, create new policies, and foster awareness investment (Kahia et al., 2021). Increasing non-petroleum exports represents a viable growth plan by replacing oil-based goods (Waheed et al., 2020). The long-term cointegration of capital, tourism, renewable energy, and economic growth in Saudi Arabia resulted in the identification that capital formation can be leveraged to increase spending on tourist attractions and green energy (Waheed et al., 2020). Board independent director meeting attendance has a significantly negative association with environmental disclosure (Umar et al., 2024). Environmental disclosures were identified to be effective in promoting the return on assets (Sharawi et al., 2024). The exists a positive association between corporate environment disclosure levels and concepts such as international presence, firm size, and operations in environmentally 10 sensitive industries. Larger board sizes were identified to have a negative relationship with disclosure extent (Charchafa & Kimouche, 2024). Environmental stability disclosure significantly and negatively affects the stock return (Alsahlawi et al., 2021). In particular, the higher the level of environmental disclosure, the lower the stock return. Investors do not consider environmental stability disclosure as a sign of higher or lower risk when performing stock valuation (Alsahlawi et al., 2021). As such, investors are not willing to pay a premium price for environmental stability disclosure. The adverse impact of environmental disclosure on stock return is more significant in firms that have financial constraints. Financially constrained firms have limited resource allocation towards environmental initiatives (Alsahlawi et al., 2021. A significant connection between Green Mobility and its environmental benefits that promote the quality of life in Saudi Arabia exists (Almatar et al., 2023). Green mobility is associated with creating safe, efficient, flexible, and responsive cities that require less effort, travel, and traffic, which fosters environmental sustainability. Consequently, green mobility is associated with increased investment, time savings, decreased traffic congestion, better air quality, climate protection, and diversified energy supply. Green mobility benefits promote economic, social, and environmentally friendly benefits, which can enhance Saudi Arabia's citizens' health outcomes (Almatar et al., 2023). The ecological footprint is affected by energy consumption, urbanization, economic growth, natural resources, and technological innovation (Aldegheishem et al., 2024). The achievement of economic growth requires the use of natural resources and 11 energy, which increases the ecological footprint. An increased focus on technological innovation is important to decrease the ecological footprint. Also, natural resources, urbanization, and technological innovation reduce the ecological footprint. Comparably, economic growth and energy consumption increase ecological footprint. For this reason, energy policies should be addressed to introduce initiatives for decreasing ecological footprint and economic growth (Aldegheishem et al., 2024). It is recommended that for a city such as Jeddah to achieve a sustainable environment, there is a need for policy improvement, strategic planning, and capitalization (Hegazy et al., 2024). Strategic planning can include focusing on energy and decreasing CO2 emissions in the industrial and residential sectors by adopting energy-saving technologies. The switch to renewable energy, such as solar, can promote energy saving. Enhancing land use policies to attain sustainable growth through green building practices and natural spaces can promote environmental sustainability in Saudi Arabia. The adoption of stringent water conservation measures, implementing water-saving technologies, enhancing wastewater treatment, creating climate-resilient infrastructure, and having comprehensive climate change policies can improve environmental sustainability in Saudi Arabia (Hegazy et al., 2024). In Al-waha residential neighborhood, it was identified that effective social sustainability has been achieved because of the availability of pedestrians' sidewalks, gardens and parks, and landmarks (Nasser & Alghamdi, 2022). Renewable energy consumption results in a negative, but insignificant impact on the gross domestic product (Shammre, 2024).

6. Social Sustainability in Saudi Arabia

Social disclosure is commonly known as corporate social responsibility. In Saudi Arabia, there are numerous rules and regulations for promoting corporate governance in listed companies. In 1985, the Ministry of Commerce and Industry released the transparency and disclosure rules (Bamahros et al., 2022). Transparency and disclosure are two of the most essential aspects of good governance, whose implementation enhances standards. In terms of corporate governance, Saudi Arabia has made significant progress over the past two decades, which began by issuing internal control guidance in 2000. Then in 2006, the Saudi Code of Corporate Governance mandated all listed companies in the Kingdom to be transparent (Bamahros et al., 2022). Based on data from 206 companies annually, it was identified that for Saudi-listed companies from 2010 to 2019, the presence of royal members of boards and external persons on audit committees had a positive and substantial connection with ESG disclosure (Bamahros et al., 2022).

Accordingly, Saudi Arabia has emerged as a leading nation in the adoption of corporate social responsibility activities (Tajunnisa et al., 2023). The openness and moral behavior of organizations such as Aramco in Saudi Arabia have promoted an increased focus on sustainable development. Sustainable development is focused on safe operations, decreased environmental impact, and improved societal value. There is a need to maintain a balance between energy security, affordability, and environmental sustainability. Engaging in corporate social responsibility practices positively impacts company performance, customer satisfaction, reputation, employee engagement, and loyalty, which decreases any adverse negative environmental and social impacts (Tajunnisa et al., 2023). The increased importance of CSR has been supported by the significance of the practice of sustainable development in societies (Touny et al., 2021). 13 In Saudi Arabian organizations, the ethical motivation of senior management and promoting the mental image of the firm are essential reasons that make companies adopt social responsibility practices (Touny et al., 2021). Social disclosure has a positive influence on financial performance because CSR is directly linked to the company's operation and improvement, which can reduce operation costs (Abdi et al., 2022). Sustainability and innovation improve customer perceptions and are vital in small and medium enterprises' competitive advantage, which ensures alignment with national economic diversification aims (Tarifi et al., 2024). Additionally, social disclosures positively impact the return on equity (Sharawi et al., 2024). Only board chairman independence and audit committee meetings have a significant positive association with social disclosure (Umar et al., 2024).

7. Governance Sustainability in Saudi Arabia

Disclosing governance information enables stakeholders and investors to have access to helpful information that can be used in making decisions related to things such as ownership structure and board composition (Rossi et al., 2021). Saudi Arabia's code of corporate governance emphasizes social responsibility (Bamahros et al., 2022). Artificial Intelligence (AI) can help in understanding aspects of governance and creating effective tools. Governments can use AI to monitor, learn from, and enhance decision-making procedures without replacing humans, all while receiving input from stakeholders and the public (Alswedani et al., 2022). Sustainability, perceived desirability, perceived feasibility, and opportunity recognition have a significant and favorable impact on sustainable entrepreneurial intentions and opportunity recognition (Abdelwahed, 2022). An assessment of 29 listed companies in Saudi Arabia 14 resulted in identifying that board chairman independence and the size of the audit committee have a negative and positive association with ESG disclosure, respectively (Umar et al., 2024). Governance disclosure has a significant impact on earnings per share in companies (Sharawi et al., 2024). Additionally, corporate governance has a positive impact on women's empowerment, which helps in achieving business sustainability in family-owned firms (Rawaf & Alfalih, 2024). Adopting good corporate governance policies can promote women's empowerment by creating a supporting culture that promotes the organization's mission, purpose, and strategies that assist in creating an enabling environment for promoting sustainability.

8. Limitations of the Study

A limitation of the study is that data were retrieved from existing literature, which could have been impacted by reporting bias. Researchers could likely have been selective in reporting theory findings. Also, researchers could have misrepresented their study findings, which could skew the understanding of ESG sustainability initiatives in Saudi Arabia. In the future, researchers can collect primary data by applying quantitative, qualitative, and mixed methods designs. The collection of primary data would help eliminate depending on secondary information, which could be subject to bias. Another limitation is that the researcher does not claim to have exhausted all existing literature on ESG sustainability initiatives in Saudi Arabia. Although there could be additional literature that can be added to the review, the researcher ensured to include as much literature as possible to ensure that the study is comprehensive. In the future, researchers can conduct systematic reviews on the topic, to help in understanding the breadth of literature that exists on the concepts.

9. Conclusion

Companies in Saudi Arabia should implement global schemes to promote ESG performance to maximize the share of foreign investment to improve the nation's, promote competitive advantages, and enhance sustainability. The adoption and implementation of ESG reporting and activities in Saudi Arabia are still in the introductory and initial stages, where firms spend significant capital expenditure, which could result in firms losing in the short term. Also, ESG disclosure is voluntary in the Kingdom. The other explanation for why ESG reporting can decrease or insignificantly impact firms in the Kingdom is the lack of familiarity with activities that makes companies apply weak and ineffective implementation approaches. As such, companies in Saudi Arabia should continuously and consistently implement ESG activities and report them, to ensure familiarity, which could result in sustainably improving their financial performance. Also, more initiative by responsible authorities through lawful and operational reforms can enhance investors' confidence in companies participating in ESG. Policymakers in the Kingdom should provide financing and enhance the use of renewable energy among consumers and industry. There is a need to find a balance between economic growth and environmental preservation by adopting sustainable practices in the energy sector. Policymakers in the Kingdom should continue to advocate for continued ESG disclosures and independent board compositions. The approaches could significantly improve corporate governance and sustainability practices, resulting in favorable market outcomes. Policymakers in Saudi Arabia should reform the Kingdom's energy efficiency and consumption technologies to decrease energy wastage and achieve sustainable development goals (Shammre et al., 2024). In essence, a need exists to integrate sustainability and innovation in business practices to enhance customer satisfaction and promote economic transformation in Saudi Arabia.

References

[1] A. Aldegheishem (2024). "Assessing Urban Sustainability in Saudi Arabia: An Empirical Evidence from Al-Medina Al-Munawwarah," Environment Research Communications, vol, 6. no. 5. 2024.

[2] A. Aldegheishem (2024). "Factors Affecting Ecological Footprint in Saudi Arabia: A Panel Data Analysis," Frontiers in Environmental Science, vol. 12. pp. 1-10. 2024.

[3] A. Al-Tit, A. Omri, and J. Euchi (2019). "Critical Success Factors of Small and Medium-Sized Enterprises in Saudi Arabia: Insights from Sustainability Perspective." Administrative Science, vol. 9, no. 2. pp. 32-42. 2019.

[4] A. H. A. Seraj, S. A. Fazal, and A. S. Alshebami (2022). "Entrepreneurial Competency, Financial Literacy, and Sustainable Performance - Examining the Mediating Role of Entrepreneurial Resilience among Saudi Entrepreneurs," Sustainability, vol. 14. no. 17. pp. 1-10. 2022.

[5] A. Kouaib, (2022). "Corporate Sustainability Disclosure and Investment Efficiency: The Saudi Arabian context," Sustainability, vol. 14. 2022.

[6] A. M. Alsahlawi, K. Chebbi, and M. A. Ammer (2021). "The Impact of Environmental Sustainability Disclosure on Stock Return of Saudi Listed Firms: The Moderating Role of Financial Constraints," International Journal of Financial Studies. vol. 9. No. 1. pp. 4-10. 2021

[7] A. S.A. Shammre (2024). "The Impact of Using Renewable Energy Resources on Sustainable Development in the Kingdom of Saudi Arabia," Sustainability, vol. 16. no. 3. 2024.

[8] Al-Monitor (2023). Saudi Arabia Launches Investment Fund for Sports, Entertainment Events. Available:https://www.al-monitor.com/originals/2023/01/saudi-arabia-launches-investment-fund-sports-entertainment-events

[9] D. Workman (2024). Crude Oil Exports by Country. Available: https://www.worldstopexports.com/worlds-top-oil-exports-country/

[10] E. A. Firmansyah, U. H. Umar, and R. S. Jibril (2022). "Investigating the Effect of ESG Disclosure on Firm Performance: The Case of Saudi Arabian Listed Firms," *Cogent Economic & Finance*, vol. 11, no. 2, pp. 1-10. 2022.

[11] Ehata, (2024). More than just oil: Saudi Arabia's improved credit rating. Available:https://ehata.com.sa/saudi-arabias-journey-to-sustainable-sovereign-debt-2/

[12] G. M. Nasser, and M. Alghamdi (2022). "Social Sustainability in the Built Environment of Riyadh City (Case Study: Al-Waha Residential Neighborhood)," vol.27. no. 2. pp. 1-10. 2022.

[13] H. Alregab (2022). “The Role of Environmental, Social, and Governance Performance on Attracting Foreign Ownership: Evidence from Saudi Arabia,” *Sustainability*, vol. 14, no. 23, Article 15626, 2022.
[14] H. M. Bamahros, A. Alquhaif, A. Qasem, W. N. Wan-Hussin, M. Thomran, S. D. Al-Duais, S. N. Shukeri, and H. M. S. Khojally (2022). “Corporate Governance Mechanisms and ESG Reporting: Evidence from the Saudi Stock Market,” *Sustainability*, vol. 14, no. 6202. 2022.
[15] H. Shalhoob, and K. Hussainey (2022). “Environmental, Social and Governance (ESG) Disclosure and the Small and Medium Enterprises (SMEs) Sustainability Performance,” *Sustainability*, vol. 15, no. 1, pp. 200-210. 2022.
[16] H. Sharawi, H. Al-Zahrani, and A. Al-Asmari (2024). “The Moderating Effect of Board Characteristics in the Relationship Between ESG Disclosure and Financial Performance: Evidence from KSA,” Educational Administration: Theory and Practice, vol. 30. no. 7. pp. 1055-1067. 2024.
[17] I. Adileh (2022). The Importance of ESG Reporting in KSA. Available: https://www.grantthornton.sa/en/insights/articles-and-publications/importance_of_ESG_reporting/
[18] I. Charchafa, and B. Kimouche (2024). “Understanding Environmental Transparency: A Study of Saudi Arabian Companies,” Oeconomica Jadertina, vol. 14. no. 1. pp. 22-40. 2024.
[19] I. R. Hegazy, H. A. Hammad, A. M. Munshi, A. A. Alqurashi, and I. Z. Bahreldin (2024). “Pathways to Green Urbanism: Evaluating Jeddah’s Environmental Sustainability Progress and Prospects,” International Journal of Low-Carbon Technologies. vol. 19. pp. 1177-1188. 2024.
[20] I. Shaikh (2021). “Environmental, Social, and Governance (ESG) Practice and Firm Performance: An International Evidence,” *Journal of Business Economics and Management*, vol. 23, no. 2, pp. 218-237. 2021.
[21] Institutional Investor (2022). Moving Forward on ESG: Saudi Arabia’s Stock Exchange Advances Its Commitments to Sustainability. Available: https://www.institutionalinvestor.com/article/2bstlvaw9ypad64jf2b5s/innovation/moving-forward-on-esg-saudi-arabias-stock-exchange-advances-its-commitments-to-sustainability
[22] J. Gai, D. Chu, J. Zheng, and T. Ye (2022). “Environmental, Social and Governance Performance: Can it be a Stock Price Stabilizer?” *Journal of Cleaner Production*, vol. 379. 1-10. 2022.
[23] K. Albitar, K. Hussainey, N. Kolade, and A. M. Gerged (2020). “ESG Disclosure and Firm Performance Before and After IR: The Moderating Role of Governance Mechanisms,” *International Journal of Accounting and Information Management*, vol. 28, no. 2, pp.1-21. 2020.
[24] K. Chebbi, and M. A. Ammer (2022). “Board Composition and ESG Disclosure in Saudi Arabia: The Moderating Role of Corporate Governance Reforms,” *Sustainability*, vol. 14. no. 12173. 2022.

[25] K. M. Almatar (2023). "Towards Sustainable Green Mobility in the Future of Saudi Arabia Cities: Implication for Reducing Carbon Emissions and Increasing Renewable Energy Capacity," Heliyon, vol. 9. no. 3. pp. 1-10. 2023.
[26] M. A. Hashmi and M. Al-Habib (2013). "Sustainability and carbon management practices in the Kingdom of Saudi Arabia." *Journal of Environmental Planning and Management*, vol. 1 no. 1.
[27] M. A. Touny, K. A. Qamar, and M. M. Alayis (2021). "Corporate Social Responsibility Practices and Their Impact on Sustainable Development in Saudi Arabia (Forthcoming)," vol. 12. No. 2. pp. 185-195. 2021.
[28] M. Alyahya, M. Aliedan, M. G. Agag, and Z. H. Abdelmoety (2022). "Exploring the Link Between Sustainable Development Practices, Institutional Pressures, and Green Innovation." *Sustainability*, vol. 14. pp. 1-15. 2022.
[29] M. Kahia, A. Omri, and B. Jarraya (2021). "Green Energy, Economic Growth and Environmental Quality Nexus in Saudi Arabia." *Sustainability*, vol. 13. no. 3. pp. 1-14. 2021.
[30] M. Rossi, J. Chouaibi, S. Chouaibi, W. Jilani, and Y. Chouaibi (2021). "Does a Board Characteristic Moderate the Relationship between CSR Practices and Financial Performance? Evidence from European ESG Firms." *Journal of Risk and Financial Management*, vol. 14. no. 8. pp.354-364. 2021.
[31] N. A. A. Abdelwahed (2022). "Developing Entrepreneurial Sustainability Among Saudi Arabia's University Students," *Sustainability*, vol. 14. 2022.
[32] N. Ahmad, A. Mobarek, and N. N. Roni (2021). "Revisiting the Impact of ESG on Financial Performance of FTSE350 UK Firms: Static and Dynamic Panel Data Analysis," *Cogent Business & Management*, vol. 8, no. 1, pp. 1-19. 2021.
[33] N. Tarifi (2024). "The Role of Sustainability and Innovation in Small Business Transformation in Saudi Arabia," American Journal of Industrial and Business Management, vol. 14. no. 4. 2024.
[34] N. Vinodkumar, and G. Alarifi (2022). "Environmental Social Governance: A Core Value to Responsible Stakeholders and Stock Market Sustainability in the Kingdom of Saudi Arabia," *Journal of Sustainable Finance & Investment*, vol. 1, no. 1. pp. 1-18. 2022.
[35] Public Investment Fund (2024). [Online]. Green finance framework. Available:https://www.pif.gov.sa/en/our-financials/green-finance-framework/
[36] R. A. A. Rawaf, and A. A. Alfalih (2024). "Family Business Sustainability: The Impact of Governance and Women's Empowerment in Saudi Arabia," Future Business Journal, vol. 10. no. 46. pp. 1-10. 2024.
[37] R. Boffo, and R. Patalano (2020). ESG investing: Practices, progress, and challenges. OECD Paris. Available: https://www.oecd.org/finance/ESG-Investing-Practices-Progress-and-Challenges.pdf
[38] R. Rahman, and A. Qattan (2021). "Vision 2030 and Sustainable Development: State Capacity to Revitalize the Healthcare System in Saudi Arabia." vol. 1, no. 1. 1-10. 2021.

[39] R. Waheed, S. Sarwar, and A. Dignah (2020). "The Role of Non-Oil Exports, Tourism, and Renewable Energy to Achieve Sustainable Economic Growth: What we Learn from the Experience of Saudi Arabia," Structural Change and Economic Dynamics, vol. 55. no. 1. pp. 49-58. 2020.
[40] S. Alswedani, I. Katib, E. Abozinadah, and R. Mehmood (2022). Discovering Urban Governance Parameters for Online Learning in Saudi Arabia During COVID-19 Using Topic Modeling of Twitter Data. *Sustainable Cities*, vol. 4. 1-124. 2022.
[41] S. Tajunnisa, D. M. H. Kee, R. A. Alzahri, G. Alsanie, and R. BinSaeed (2023). "Corporate Sustainability and Vision 2030: Exploring ARAMCO's Role in Promoting Social Responsibility for Sustainability," Journal of Law and Sustainable Development, vol. 11. no. 12. pp. 1-15. 2023.
[42] Saudi Exchange (2021). ESG disclosure guidelines. Available:https://sseinitiative.org/wp-content/uploads/2021/11/Tadawul-ESG-Disclosure-Guidelines-EN.pdf
[43] U. H. Umar, E. A. Firmansyah, M. R. Danlami, and M. A. S. Al-Faryan (2024). "Revisiting the Relationship Between Corporate Governance Mechanisms and ESG Disclosures in Saudi Arabia," Journal of Accounting & Organizational Change, vol. 20. no. 4. pp. 724-747. 2024.
[44] United Nations (2024). Sustainability. Available: https://www.un.org/en/academic-impact/sustainability
[45] W. Ghardallou (2022). "Corporate Sustainability and Firm Performance: The Moderating Role of CEO Education and Tenure," *Sustainability*, vol. 14, no. 6, pp. 1-16. 2022.
[46] W. I. Almubark, M. A. Ammer, K. Chebbi, and A. I. Almubark (2023). ESG and Financial Sustainability: The Role of Saudi Corporate. Available: https://cma.org.sa/en/ResearchAndReports/Documents/ESG-TheRoleofSaudiCorporateGovernanceReforms.pdf
[47] World Economic Forum (2024). Stakeholder metrics initiative: Over 150 companies implement sustainability reporting metrics. https://www.weforum.org/impact/stakeholder-capitalism-reporting-metrics-davos2024/
[48] Y. Abdi, X. Li, X. Camara-Turull (2022). "Exploring the Impact of Sustainability (ESG) Disclosure on Firm Value and Financial Performance (FP) in Airline Industry: The Moderating Role of Size and Age," *Environment, Development and Sustainability*, vol. 24, pp. 5052-5079. 2022.