

Women's Leadership on Carbon Disclosure

Subjects: Business, Finance

Contributor: Nurshahirah Abd Majid, Amar Hisham Jaaffar

The energy sector is one of the primary sources of carbon emissions and the most significant global polluter. Women's concerns and the climate crisis were strongly associated when issues about climate change were first articulated in the United Nations Sustainable Development Goals stressing gender equality and climate mitigation actions have received very little attention in the last decade.

Keywords: carbon disclosure ; energy industry ; women's leadership ; environmental reporting ; climate change

1. Introduction

Our planet's temperature has increased due to greenhouse gas emissions brought on by human activity, particularly the release of carbon dioxide gas from burning fossil fuels. This has influenced the entire ecosystem ^{[1][2][3][4]}. Wide-ranging effects of climate change include increased global temperatures, harsh weather, shifting wildlife populations and habitats, rising sea levels, and other significant effects ^{[1][2][3][4]}. Governments and organizations, such as the United Nations' Intergovernmental Panel on Climate Change (IPCC), evaluate greenhouse gases, observe their effects, and propose strategies, particularly for the greatest polluters ^[2]. In the COP26, IEA highlighted their responsibility and crucial role in strengthening their climate change mitigation activities and adapting their strategies and initiatives to improve climate resilience. The corporate world, particularly the energy sector, is the major contributor to climate change, accounting for more than two-thirds of all greenhouse gas emissions worldwide ^[5]. In 2020, the energy sector contributed the most greenhouse gas emissions globally, approximately 24.2 percent, with the oil and gas and electricity sectors among the top contributors ^[6]. In contrast to the statements mentioned earlier, climate change severely affects all living creatures, including humans. Surprisingly, increasing gender parity will be beneficial in reducing the impact of climate change ^[4]. In a poll conducted by the UN Development Program (UNDP), 1.2 million people in 50 countries were asked questions ^[7]. According to the poll results presented by UNDP, young people are highly concerned about climate change and have labeled it as a global emergency ^[7]. Unexpectedly, the survey revealed that women were more concerned about global warming than men ^[7]. However, women are persistently underrepresented in environmental issues and women's rights and leadership ^{[4][8]}. Yet, when the proportion of women in a group rises, collective intelligence increases, resulting in a more forward-looking and successful conclusion and more sustainability-focused decision-making across all sectors, particularly in the energy industry ^[9]. Women's empowerment and climate resilience have been prioritized by the Sustainable Development Goals since 2015 to achieve gender equality and a climate solution, but they have garnered little public attention ^[9]. Gender parity ranked second out of the 76 strategies suggested for keeping global warming to 2 degrees Celsius, particularly in industrialized nations, according to a recent assessment by the climate research group Project Drawdown ^[9]. As a result of their particular expertise and experience, women must play a more significant part in developing and implementing programs to address climate ^[10]. The success of climate action depends on their input into decision-making processes. A 2019 study found that having more women in the national parliament leads to adopting much stricter climate change policies, which in turn lowers emissions ^[10]. More significant conservation and resource governance at the local level is correlated with women's participation in natural resource management ^[10].

Women's leadership and increased climate effect transparency in the workplace are related ^[10]. Higher percentages of women on company boards positively correlate with reporting carbon emissions statistics ^[10]. Effective, collective action against climate change requires significant changes in how researchers produce and assess economic value ^[10]. As researchers transition away from extractives practices and fossil fuel economies, they can generate new opportunities and up-skill female workers ^[10]. Incorporating different gender perspectives into comprehensive and long-lasting policies and programs for disaster and environmental and climate risk reduction is a major goal in the fight against climate change to achieve a sustainable future for the entire globe, and an approach that considers gender parity is the answer to climate change for a more sustainable future ^[10]. At the COP26 climate summit, the leaders of Bangladesh, Tanzania, and Estonia were the first to sign the Glasgow Women's Leadership Declaration, which urged countries to support women's leadership on climate change at all societal and political levels ^[11]. On Gender Day at the COP, nations, including the US, UK, and

Canada, pledged to integrate gender into their climate finance arrangements further. Despite increasing commitments for “gender-responsive” financing, talks for climate funds garnered very little attention for gender-related issues ^[11]. Making the Glasgow Women’s Leadership Declaration a reality is, thus, influential ^[11]; women are crucial in meeting the COP26 climate targets. Despite these challenges and observations, gender parity in national environmental decision-making is uncommon ^[11].

Earlier studies show a link between more excellent firm performance and female representation in business and on boards of directors ^[12]. Countries where women actively participate in politics are also more inclined to take drastic climate action ^[12]. A study conducted using data from a broad sample of countries evaluated showed that the presence of women in legislative bodies led to more vital climate change legislation ^[12]. Additionally, countries in which women have higher political and social standing often have smaller climate footprints and emit fewer greenhouse gases. A more diversified workforce and leadership can promote creativity and creative solutions to climate challenges ^[12]. To achieve this, the C3E International Initiative under the IEA Technology Collaboration Program and the Clean Energy Ministerial expressly aims to promote greater gender diversity in clean energy professions ^[13]. Taking advantage of the distinctive and innovative viewpoints that senior women managers may provide could hasten the global transition to renewable energy ^[13].

Women have substantially more leadership positions in large energy-related global corporations, many of which have developed corporate strategies centered on diversity and inclusion ^[13]. However, women are underrepresented in senior management positions ^[13]. The energy industry is a stark example; less than 5% of applicants are chosen for executive roles, including board chair, CEO, and president ^[13]. Notably, in the energy sector, the percentage of women holding board seats and senior management positions is stubbornly low ^[13]. It could take years for most energy corporations to understand the potential contribution of women ^[14] fully^[14]. Comparatively, larger businesses are more likely to have comprehensive gender employment practices since they are subject to higher investor scrutiny ^[14]. Gender diversity in the energy sector must be strengthened through sustained inclusionary measures ^[14]. The low-carbon transition will bring about unprecedented and turbulent changes, and businesses that encourage more gender-inclusive career paths for women in top management would be better able to manage these changes ^[14]. Women must, therefore, actively participate in the energy sector ^[13].

Bridging this gender gap will be essential because women are critical for inclusive innovation ^[13]. The energy industry is still one of the least gender-diverse industries ^[13]. Despite making up 48% of the global workforce, women only comprise 22% of the traditional energy sector, and their representation in management positions is much lower ^[13]. The difficulties are now more pressing since the energy sector is changing ^[13]. Transitioning to clean energy will demand innovative solutions, commercial models, and the increased participation of those with varied knowledge and expertise ^[13]. Even though the energy sector is generally dominated by men ^{[15][16]}, women could play a significant role in the transition to clean energy, both as consumers who can change their energy consumption and as change makers inside the sector ^[14]. It would have been simpler to combine environmental and gender goals had more gender diversity on business boards and in top management roles ^[14]. More “green” decisions would also be made in the public and commercial spheres if more women were in the energy sector’s top management and leadership positions ^[14]. Women are essential as energy professionals, decision-makers, and consumers ^[14]. Women and men have distinct preferences, for example, regarding the energy shift and the use of renewable energy ^[17]. Energy policy is generally gender-blind despite women being underrepresented in the industry at all levels, including bottom-up approaches such as community-based solutions ^[18]. Therefore, there should be efforts for immediate action to remove institutional hurdles in the way of women’s participation in the workforce and participation in decision-making in the energy sector while also acknowledging the benefits of a green transition for gender equality and the potential role that women could play in the clean energy sector given their behavioral preferences ^[19]. Correspondingly, in a communiqué that was adopted at the IEA Ministerial meeting in December 2019, IEA Ministers specifically endorsed additional IEA efforts to raise and share knowledge to help address issues related to future human capacity demands, including equal opportunities for women and men in the energy sector, as well as the gender composition of corporate boards ^[13].

2. Climate Change and Energy Sector

The ecosystem’s health is deteriorating more rapidly than ever ^[20], and unprecedented progress has been made in understanding climate change over the past ten years ^[21]. This has prompted increased efforts to limit greenhouse gas (GHG) emissions to stop global warming. Since climate change is approaching crisis proportions, our safety net is practically at breaking point, and the current international reaction is deemed insufficient. Therefore, systematic transformative reforms are urgently needed to restore and defend the ecosystem ^[20]. The Paris Agreement, which superseded the Kyoto Protocol, urges businesses to adopt long-term strategies that balance the economy and nature ^[23]

and establish ambitious targets for lowering GHG emissions to^[22], and set ambitious targets for reducing GHG emissions to combat climate change ^[23]. Large-scale carbon-producing industries and businesses are one of the primary sources of GHG emissions ^[24]. Globally, there is an urgent need for the industry to play a role in combating climate change, particularly among the energy sectors, which are responsible for most greenhouse gas emissions into the environment ^[23]. A part of the larger field of corporate social responsibility (CSR) research, which investigates business responsibilities towards society and the environment, is studying climate change and the energy sector ^[25]. It found that the energy industry is crucial in mitigating climate change, and energy corporations must take the lead in lowering emissions.

Due to climate change becoming the most recent and prominent issue that management and stakeholders are concerned about ^[26], regulators, investors, and other stakeholders are urging businesses to increase their transparency by disclosing non-financial information ^[27], including their carbon emissions ^{[23][28][29]}. Reporting related to corporate social and environmental issues informs specific social groups and society at large about the social and ecological effects of an organization's economic decisions; carbon disclosure processes are seen as an essential part of this process ^[30]. To demonstrate their accountability, diligence, and obligation to stakeholders ^[31], companies disclose information about climate change in a variety of ways ^[22], with carbon disclosure seen as the primary strategy to address climate change concerns and reduce a company's carbon release ^[32]. The sustainability reporting organizations present in their annual, standalone sustainability, corporate social responsibility, integrated, or online reports generally includes information on greenhouse gas emissions ^[33]. They reveal the precise amount of carbon released into the environment by national, global, or governmental organizations ^[24] within specific regulatory frameworks ^[34]. Even though it is not required and is generally unregulated, many businesses voluntarily report their climate efforts and actions under the Carbon Disclosure Act ^[35]. To make measurement and reporting processes simpler, the Global Reporting Initiative (GRI), CERES, and the CDP (previously Carbon Disclosure Project) are just a few examples of the frameworks and standards for global carbon reporting that have been developed ^[25]. Additionally, the voluntary recommendations from the Task Force on Climate-related Financial Disclosures (TCFD) support materiality evaluations incorporating climate change's long-term difficulties and effects ^[35]. They urge all groups to report on climate-related problems, regardless of the severity of the threats ^[35]. Concurrently, many academic studies into carbon disclosure procedures, drivers, and consequences have been published ^[36]. However, there is a need to formalize and increase the amount of carbon disclosure among companies ^{[37][38][39]}. Additionally, despite their importance and potential benefits, there has not been much research into carbon disclosure practices in the energy sector ^[25].

3. Women's Leadership and Carbon Disclosure

The second stream of ESG literature defines corporate governance, particularly environmental disclosure, including carbon disclosure, as a potent tool for enhancing sustainability performance ^[40]. The necessity of gender diversity on the board is heavily emphasized in the body of literature already available on corporate governance ^[40]. Due to the positive association between board gender diversity and environmental, social, and governance performance, there is a lot of discussion regarding board gender diversity in the literature in this respect ^[40]. Women directors like to be involved in new topics, including addressing the effects of climate change, improving carbon disclosure measures, and developing stakeholder communication strategies ^[41]. More WOBs, according to prior research, enhance internal board regularity, favor board strategic control, and reduce conflicts ^{[42][43][44]}. Furthermore, increased corporate social responsibility (CSR) disclosure and performance ^{[45][46][47][48]}, including environmental reporting such as carbon disclosure, is often attributed to women's leadership. According to empirical data, women directors perform better than male directors regarding social and environmental issues ^{[49][50][51][52][53]}, especially when managing corporate ecological problems ^[54]. For instance, ^{[31][55][56]} demonstrated a link between the likelihood of disclosing carbon information and the proportion of female directors on the board. In addition, Zahid et al. ^[57] found that female directors are more aware of their companies' corporate social and environmental duties and are more successful at monitoring management's environmental initiatives. Scholars appear to agree about the importance of board characteristics in determining corporate social responsibility. Still, there is disagreement and a general lack of clarity about specific effects ^[58], such as the link between board gender diversity and carbon disclosures ^{[31][32][55][59]}. Some authors asserted that companies could benefit by bringing more WOB, even if they face gender inequity and prejudice that limit their ability to contribute to carbon initiatives ^[57]. The specific contribution of female directors to carbon-related disclosure policies has been extensively researched at this point ^{[55][59][60][61]}. These researchers support that women contribute to a board's effectiveness in resolving environmental issues ^[62], but it is unclear how corporate boardroom diversity will address those concerns ^[63].

References

1. Bates, S. Arctic Animals' Movement Patterns Are Shifting in Different Ways as the Climate Changes—Climate Change: Vital Signs of the Planet. Available online: <https://climate.nasa.gov/news/3046/arctic-animals-movement-patterns-are-shifting-in-different-ways-as-the-climate-changes/> (accessed on 1 July 2022).
2. Nunez, C. Carbon Dioxide Levels Are at a Record High; Here's What You Need to Know. Available online: <https://education.nationalgeographic.org/resource/carbon-dioxide-levels-are-record-high-heres-what-you-need-know/> (accessed on 1 December 2022).
3. Brown, K. 2020 Tied for Warmest Year on Record, NASA Analysis Shows. Available online: <https://www.nasa.gov/press-release/2020-tied-for-warmest-year-on-record-nasa-analysis-shows> (accessed on 1 July 2022).
4. Wilkinson, K. Women Hold the Key to Curbing Climate Change; CNN: Atlanta, GA, USA, 2019.
5. Walton, M. If the Energy Sector Is to Tackle Climate Change, It Must Also Think about Water. Available online: <https://www.iea.org/commentaries/if-the-energy-sector-is-to-tackle-climate-change-it-must-also-think-about-water> (accessed on 31 December 2020).
6. Mountford, H.; Fransen, T.; Srouji, J.; Gonzalez, L.; Cogswell, N.; Holt, M.; Dagnet, Y.; Carter, R.; Gerholdt, R. Will COP26 Be a Success? That Depends on 4 Critical Questions. Available online: <https://www.wri.org/insights/success-cop26-glasgow> (accessed on 15 December 2022).
7. Carrington, D. UN Global Climate Poll: 'The People's Voice Is Clear—They Want Action'. Available online: <https://www.theguardian.com/environment/2021/jan/27/un-global-climate-poll-peoples-voice-is-clear-they-want-action> (accessed on 15 July 2022).
8. Ivanova, M. Paris Climate Summit: Why More Women Need Seats at the Table; Cable News Network (CNN): Boston, MA, USA, 2015.
9. Breland, K. Women's Empowerment Is Key to Reducing Climate Change. Available online: <https://www.earthday.org/womens-empowerment-is-key-to-reducing-climate-change/> (accessed on 1 July 2022).
10. United Nations Women, U.W. Explainer: Why Women Need to be at the Heart of Climate Action. Available online: <https://www.unwomen.org/en/news-stories/explainer/2022/03/explainer-why-women-need-to-be-at-the-heart-of-climate-action> (accessed on 31 December 2022).
11. Jeffs, N. Why Women's Leadership Is Key to Climate Action; UNFCCC: New York, NY, USA, 2022.
12. Barnes, A.; Alexander, M.; Buchanan, M.J.; Ahmed, O.; Zhavoronkova, M.; Hoffman, E.; Chyung, C.; Argento-McCurdy, H.; Madson, D. Uplifting Women in the Clean Energy Economy. Available online: <https://www.americanprogress.org/article/uplifting-women-in-the-clean-energy-economy/> (accessed on 1 July 2022).
13. Pilgrim, G.; Nicholson, D.-J.; Johnstone, N.; Nghiem, A. Women in Senior Management Roles at Energy Firms Remains Stubbornly Low, But Efforts to Improve Gender Diversity Are Moving Apace; International Energy Agency: Paris, France, 2021.
14. OECD. Gender and the Environment: Building Evidence and Policies to Achieve the SDGs; OECD Publishing: Paris, France, 2021.
15. European Institute for Gender Equality. Gender and Energy. Eur. Inst. Gend. Equal. 2017, 1–23.
16. IRENA. A Gender Perspective; International Renewable Energy Agency: Masdar City, United Arab Emirates, 2019.
17. Fraune, C. The politics of speeches, votes, and deliberations: Gendered legislating and energy policy-making in Germany and the United States. *Energy Res. Soc. Sci.* 2016, 19, 134–141.
18. Fraune, C. Gender matters: Women, renewable energy, and citizen participation in Germany. *Energy Res. Soc. Sci.* 2015, 7, 55–65.
19. Clancy, J.; Feenstra, M. Women, Gender Equality and the Energy Transition in the EU; European Parliament: Strasbourg, France, 2019.
20. United Nations, U. UN Report: Nature's Dangerous Decline 'Unprecedented'; Species Extinction Rates 'Accelerating'; United Nations: New York, NY, USA, 2019.
21. Climate Disclosure Standards Board, C. CDSB Framework Advancing and Aligning Disclosure of Environmental and Social Information in Mainstream Reports for Reporting Environmental & Social Information; International Sustainability Standards Board (ISSB): London, UK, 2022; p. 18.
22. He, R.; Luo, L.; Shamsuddin, A.; Tang, Q. Corporate carbon accounting: A literature review of carbon accounting research from the Kyoto Protocol to the Paris Agreement. *Account. Financ.* 2022, 62, 261–298.

23. UNFCCC, Adoption of the Paris Agreement; United Nations Framework Convention on Climate Change: Katowice, Poland, 2015.
24. Luo, L.; Lan, Y.-C.; Tang, Q. Corporate Incentives to Disclose Carbon Information: Evidence from the CDP Global 500 Report. *J. Int. Financ. Manag. Account.* 2012, 23, 93–120.
25. de Grosbois, D.; Fennell, D.A. Determinants of climate change disclosure practices of global hotel companies: Application of institutional and stakeholder theories. *Tour. Manag.* 2022, 88, 104404.
26. Intergovernmental Panel on Climate Change. The Physical Science Basis; Summary for Policymakers; IPCC: Geneva, Switzerland, 2007.
27. Homroy, S.; Slechten, A. Do Board Expertise and Networked Boards Affect Environmental Performance? *J. Bus. Ethics* 2019, 158, 269–292.
28. Arena, M.; Azzone, G.; Mapelli, F. What drives the evolution of Corporate Social Responsibility strategies? An institutional logics perspective. *J. Clean. Prod.* 2018, 171, 345–355.
29. Bui, B.; de Villiers, C. Business strategies and management accounting in response to climate change risk exposure and regulatory uncertainty. *Br. Account. Rev.* 2017, 49, 4–24.
30. Gray, R.; Owen, D.; Adams, C. *Accounting & Accountability: Changes and Challenges in Corporate Social and Environmental Reporting*; Prentice Hall: Hoboken, NJ, USA, 1996; ISBN 9780131758605.
31. Hollindale, J.; Kent, P.; Routledge, J.; Chapple, L. Women on boards and greenhouse gas emission disclosures. *Account. Financ.* 2017, 59, 277–308.
32. Ben-Amar, W.; Chang, M.; McIlkenny, P. Board Gender Diversity and Corporate Response to Sustainability Initiatives: Evidence from the Carbon Disclosure Project. *J. Bus. Ethics* 2017, 142, 369–383.
33. Global Reporting Initiatives. GRI Annual Report 2015–2016; GRI: Amsterdam, The Netherlands, 2015; p. 77.
34. Huggins, A.; Green, W.J.; Simnett, R. The competitive market for assurance engagements on greenhouse gas statements: Is there a role for assurers from the accounting profession? *Curr. Issues Audit.* 2011, 5, A1–A12.
35. Borghei, Z. Carbon disclosure: A systematic literature review. In *Accounting & Finance*; Wiley Online Library: Hoboken, NJ, USA, 2021; Volume 61, pp. 5255–5280.
36. Hahn, R.; Reimsbach, D.; Schiemann, F. Organizations, Climate Change, and Transparency: Reviewing the Literature on Carbon Disclosure. *Organ. Environ.* 2015, 28, 80–102.
37. Zhang, Y.-J.; Liu, J.-Y. Overview of research on carbon information disclosure. *Front. Eng. Manag.* 2020, 7, 47–62.
38. Radu, C.; Caron, M.-A.; Arroyo, P. Integration of carbon and environmental strategies within corporate disclosures. *J. Clean. Prod.* 2020, 244, 118681.
39. Kouloukoui, D.; Marinho, M.M.d.O.; Gomes, S.M.d.S.; de Jong, P.; Kiperstok, A.; Torres, E.A. The impact of the board of directors on business climate change management: Case of Brazilian companies. *Mitig. Adapt. Strateg. Glob. Chang.* 2020, 25, 127–147.
40. Khan, M.A. ESG disclosure and Firm performance: A bibliometric and meta analysis. *Res. Int. Bus. Financ.* 2022, 61, 101668.
41. Charumathi, B.; Rahman, H. Do Women on Boards Influence Climate Change Disclosures to CDP?—Evidence from Large Indian Companies. *Australas. Account. Bus. Financ. J.* 2019, 13, 5–31.
42. Benkraiem, R.; Hamrouni, A.; Lakhal, F.; Toumi, N. Board independence, gender diversity and CEO compensation. *Corp. Gov. Int. J. Bus. Soc.* 2017, 17, 845–860.
43. Huse, M.; Grethe Solberg, A. Gender-related boardroom dynamics. *Women Manag. Rev.* 2006, 21, 113–130.
44. Nielsen, S.; Huse, M. The Contribution of Women on Boards of Directors: Going beyond the Surface. *Corp. Gov. Int. Rev.* 2010, 18, 136–148.
45. Harjoto, M.A.; Rossi, F. Religiosity, female directors, and corporate social responsibility for Italian listed companies. *J. Bus. Res.* 2019, 95, 338–346.
46. Khan, I.; Khan, I.; Senturk, I. Board diversity and quality of CSR disclosure: Evidence from Pakistan. *Corp. Gov. Int. J. Bus. Soc.* 2019, 19, 1187–1203.
47. Kiliç, M.; Kuzey, C.; Uyar, A. The impact of ownership and board structure on Corporate Social Responsibility (CSR) reporting in the Turkish banking industry. *Corp. Gov.* 2015, 15, 357–374.
48. Kyaw, K.; Olugbode, M.; Petracci, B. Can board gender diversity promote corporate social performance? *Corp. Gov. Int. J. Bus. Soc.* 2017, 17, 789–802.

49. Bear, S.; Rahman, N.; Post, C. The Impact of Board Diversity and Gender Composition on Corporate Social Responsibility and Firm Reputation. *J. Bus. Ethics* 2010, 97, 207–221.
50. Harjoto, M.; Laksmana, I.; Lee, R. Board Diversity and Corporate Social Responsibility. *J. Bus. Ethics* 2015, 132, 641–660.
51. Landry, E.E.; Bernardi, R.A.; Bosco, S.M. Recognition for Sustained Corporate Social Responsibility: Female Directors Make a Difference. *Corp. Soc. Responsib. Environ. Manag.* 2016, 23, 27–36.
52. McGuinness, P.B.; Vieito, J.P.; Wang, M. The role of board gender and foreign ownership in the CSR performance of Chinese listed firms. *J. Corp. Financ.* 2017, 42, 75–99.
53. Rao, K.; Tilt, C. Board diversity and CSR reporting: An Australian study. *Meditari Account. Res.* 2016, 24, 182–210.
54. Xie, J.; Nozawa, W.; Managi, S. The role of women on boards in corporate environmental strategy and financial performance: A global outlook. *Corp. Soc. Responsib. Environ. Manag.* 2020, 27, 2044–2059.
55. Liao, L.; Luo, L.; Tang, Q. Gender diversity, board independence, environmental committee and greenhouse gas disclosure. *Br. Account. Rev.* 2015, 47, 409–424.
56. Elsayih, J.; Tang, Q.; Lan, Y.-C. Corporate governance and carbon transparency: Australian experience. *Account. Res. J.* 2018, 31, 405–422.
57. Zahid, M.; Rahman, H.U.; Ali, W.; Khan, M.; Alharthi, M.; Imran Qureshi, M.; Jan, A. Boardroom gender diversity: Implications for corporate sustainability disclosures in Malaysia. *J. Clean. Prod.* 2020, 244, 118683.
58. Bolourian, S.; Angus, A.; Alinaghian, L. The impact of corporate governance on corporate social responsibility at the board-level: A critical assessment. *J. Clean. Prod.* 2021, 291, 125752.
59. Prado-Lorenzo, J.M.; Garcia-Sanchez, I.M. The Role of the Board of Directors in Disseminating Relevant Information on Greenhouse Gases. *J. Bus. Ethics* 2010, 97, 391–424.
60. Galbreath, J. Are there gender-related influences on corporate sustainability? A study of women on boards of directors. *J. Manag. Organ.* 2011, 17, 17–38.
61. Rodrigue, M.; Magnan, M.; Cho, C.H. Is Environmental Governance Substantive or Symbolic? An Empirical Investigation. *J. Bus. Ethics* 2013, 114, 107–129.
62. Haque, F. The effects of board characteristics and sustainable compensation policy on carbon performance of UK firms. *Br. Account. Rev.* 2017, 49, 347–364.
63. Nguyen, T.H.H.; Ntim, C.G.; Malagila, J.K. Women on corporate boards and corporate financial and non-financial performance: A systematic literature review and future research agenda. *Int. Rev. Financ. Anal.* 2020, 71, 101554.