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Does CSR Governance Improve Social Sustainability and Reduce the Carbon Footprint: International Evidence from the Energy Sector

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Abstract: In today's world, the energy sector is considered the backbone of any economy and plays a key role in carbon trading markets and mitigation actions. This study explores the impact of CSR governance on carbon footprints and the social performances of the energy sector. Using an international sample of 45 countries from 2002 to 2017, we find that the existence of a CSR committee improves the firm's social responsibility and effectively mitigates the carbon footprint. Further, our results present that a large CSR committee with more experienced board members are effective to implement sustainable business practices. Furthermore, a CSR committee with experienced board members does not mitigate the environmental and social concerns, when energy firms have more powerful CEOs. Collectively, our evidence indicates that the existence of CSR governance is favorable to focus on social issues than environmental ones.

Keywords: CSR committee; carbon footprint; social performance; environmental performance; sustainable development; energy sector

1. Introduction

In September 2015, the UN General Assembly gathered as part of the 70th session and adopted Sustainable Development Goals (SDGs) which aim to develop a universal sustainability program “of people, by people and for people” which is the vision with the United Nations Educational, Scientific, and Cultural organization’s (UNESCO) active presence. The essence of these goals is a global agreement which aims to respond to poverty, protect the planet by different sustainable means, and ensure inhabitants’ peace.

The SDGs set is an integration of three pillars of sustainable development which include economic, environmental, and social development [1]. These UN SDGs are the agenda of 2030 for sustainable development and are adopted by 193 nations since they tend to address more than what was covered by the UN Millennium Development Goals (MDGs). SDGs encourage the shift of focus from developing the nations in a wealth perspective towards the sustainable development of all nations. This shift focuses on the sustainability of the world’s economy and social development globally while protecting the global environment [2].

The three stated pillars are projected in 17 goals, where four relate to economic development, eight relate to social development, and four to environmental development. Social goals include SDG 1: No Poverty, SDG 2: Zero Hunger, SDG 3: Good Health and
Well-Being, SDG 4: Quality Education, SDG 5: Gender Equality, SDG 7: Affordable and Clean Energy, SDG 11: Sustainable Cities and Communities, and SDG 16: Peace, Justice, and Strong Institutions [3]. Whereas, the global environmental protection is covered under SDG 6: Clean Water and Sanitation, SDG 13: Climate Action, SDG 14: Life below Water, and SDG 15: Live on Land [2,4]. Overall, these goals highlight the importance of being responsible socially and environmentally.

Countries over the world are facing the interconnection of economic and environmental sustainability and have no choice in choosing between economic growth and dealing with climatic changes [5]. There is increasing scientific evidence that climatic changes tend to resist the achievement of economic development goals over the world. Moreover, climate change has economic costs as well as environmental costs of the carbon footprint at almost all the levels in a country from national to the individual, which provide grounds for UN Framework on Climate Change (UNFCCC) negotiations for internationally agreeing on certain aspects of environmental development. The UNFCCC of the Paris landmark Agreement 2016 integrates the actions, investment, and other initiatives to combat climate change and its key considerations include a long-term temperature goal for limiting the global temperature increase to well below 2 °C.

The impact of a particular sector on the environment and society makes it important for sustainable development and the energy sector is the most important of all. The energy sector particularly plays a vital role in sustainable environmental development since the “green economy development” is in a growing trend [6–8]. This trend aims to restructure the economies due to climatic changes and rising sea levels as the key concern of the globe is to mitigate or adapt to the climatic changes. In pursuit of doing so, the efforts directly involve the contribution of the energy sector such as the reduction of greenhouse gases, exhaustion of fuel sources, and renewability of energy sources [9]. In this way, the energy sector can create a difference, not only for humans but for living creatures as well, such as the wildlife.

Another imperative ground of centering the energy sector for the aimed research is that this sector can be a key origin of the carbon footprint for society. The employed Human Resource (HR) can be taken as the foremost social aspect which can be directly impressed by the sector-wide policies on health and safety. For instance, the oil extraction companies need to uphold appropriate measures for emergency exits which are deemed to be necessary. Further, the employed HR has relatively stringent working requirements than any other sector, which makes the energy sector a probable source of social imbalance and can impact sustainable social development [10]. Moreover, the risk of corruption and other social responsibility concerns represent an important issue in the energy sector [11].

Evidence of companies not contributing to attaining sustainable development led to corporate scandals and Volkswagen is a recent example in this regard. The carbon footprint that was hidden by the company led to a loss of 1/3 market capitalization since the scandal came to the limelight and attracted a penalty in billions. The produced vehicles needed a repair that incurred additional costs to the company along with the reputation disruption its executives faced [12,13]. It is important to note that the strategic approach of such corporate scandals evidence that the governance structure can direct the CSR performance.

An imperative aspect of corporate governance concerning CSR is the presence of a CSR committee, which gives an insight into a company’s strategic approach towards its social responsibility. The CSR committee is deemed to decide the CSR performance of a company, while the independence level of the board and duality in the role of CEO are also considered to affect the CSR direction and eventual CSR performance [14].

The prior grounds show a gap between the approach to the CSR committee and actual CSR performance towards the two key pillars (environmental and social) of sustainable development [15–17]. We aimed to test the effect of the CSR committee in particular, on the environmental and social development. Prior literature also promoted the use of other governing aspects as CEO duality, independence onboard, and females on board to applaud the CSR performance of the companies’ sample [18,19]. These committee attributes help us
capture the essence of environmental and social performances whether it takes significant impressions of different CSR committee elements.

To test the stated aspect, we have taken energy sector data from 45 countries over the globe for the period covering 2002 to 2017. Our empirical results show that the presence of a CSR committee has a positive impact on the environmental and social performances of a company and an increase in the size of a CSR committee tends to affect environmental and social performance positively. The experience of the CSR committee in a company results in the betterment of performance for the achievement of environmental and social goals, whereas the level of independence in the CSR committee does not seem to affect the environmental performance and creates a slightly positive impact on the company’s social performance. Additionally, more powerful CEOs reduce the effectiveness of CSR committee characteristics. Collectively, our findings stress that the existence of the CSR committee and its associated attributes are a primary contributor to produce goods and services sustainably (improve environmental and social responsibility).

Further, we organized this manuscript as follows. Section 2 sheds light on the literature and development of the hypotheses. Section 3 discusses the data, measurements, and the methodological approach. Section 4 presents the results on the CSR committee on environmental and social responsibility, as well as additional analysis. Lastly, Section 5 concludes this study and presents the future directions.

2. Literature Review and Hypothesis

2.1. Energy Sector and CSR

The energy sector is all about the sale and production of energy. The sub-industries in the energy sector include fuel, electrical power, nuclear power, and renewable energy which are involved in the production, extraction, supply, and refinery in routine. In prior studies, the literature focused on renewable energy, and this energy is increasingly recommended to the energy sector firms in order to improve their environmental and social performance [20]. Renewable energy is the type of energy that we get from natural resources. These natural resources include sunlight, waves, wind, and rain, etc., except petroleum, coal, and nuclear energy since we have to burn them to get energy [21]. The technology of renewable energy allows energy sector firms to increase their environmental performance by reducing operational and environmental costs [22]. As a result, increasing their revenues by attracting environmentally-friendly customers lead firms to increase their firm financial performance [22,23]. Therefore, actively managed renewable energy can improve the firm’s environmental and social performance.

Additionally, firms have lower sales during the financial crisis which leads to poor financial performance [24]. However, firms with renewable energy practices performed better due to the environmental reputation that saves them from stock price shocks [21]. This may affect the investors who invest in these firms; thus, the energy sector firms have a chance to improve their financial performance in periods of financial crisis than in non-crisis periods. Another research also shows that the managed sustainable energy improves the firm’s environmental and financial performance [22].

Furthermore, the carbon footprints of the energy firms are too strong, which requires the company to either buy an emission allowance or pay fines. When the energy firms have an effective CSR committee and control carbon footprints, then the company has the opportunity to sell their surplus of carbon footprint allowances [24]. Therefore, the presence of effective CSR systems improves the CSR commitment and also saves the environmental cost for the energy sector [22,25]. Improved CSR policies aid in controlling the carbon footprint that could lead a company to improve the financial performance. Furthermore, the presence of an Environmental Management System (EMS) leads to a reduction in carbon footprint and increases the company’s profitability in the energy sector firms [24]. Collectively, these systems improve the responsible behavior of the firm and effectively boost the firm’s overall performance.
2.2. Presence of CSR Committee

CSR plays an important role in increasing the firm’s financial performance. CSR is directly linked to how companies behave with their stakeholders [26]. CSR is all about how companies behave in business activities and achieve their common sustainable goals. If the company aims to fulfill the demand of stakeholders and societies, as a result, firms gain the confidence of stakeholders and increase their reputation in the market [27]. A well-reputed company applies effective CSR policies, that improve the strategic planning and overall objectives. As a result, CSR has a positive effect on corporate performance [28]. In the modern era, CSR helps leaders make sustainable decisions to operate their business ethically. Therefore, CSR has significant positive effects on the firm’s performance [29].

In addition, the CSR committee plays an important role in the success of the company. If the companies have the existence of a CSR committee, it reduces the risk and cost, and improves the capital structure of the company. In this paper, we use the CSR committee as an independent variable [25]. If the company has an effective CSR committee, this characteristic will be helpful to grow in the market. Firms with an effective CSR committee have more spending on sustainable activities, which is beneficial for the company and also increases the financial performance. When a company has a CSR committee, that will be a competitive edge for the company. Next, if the company has an effective CSR committee, it reduces agency problems and systematic risk in the company [30]. The creation of a CSR committee responds to statements of stakeholder theory, as it implies the creation of governance bodies that can fulfill the stakeholder needs. Further, the presence of a CSR committee serves as the connection between the stakeholder theory and agency theory, as “CSR engagement is a principal-agent relation between managers and shareholders”. In contrast, the absence of a CSR committee leads towards less informed stakeholders [31]. Therefore, in response, the management does not drive sustainable decisions and does not give effective advice to the stakeholders [25].

Furthermore, the major objective of this study is to investigate how the CSR committee affects environmental and social performance. One of the most significant current discussions in legal and moral philosophy is that the main aims of the company are to maximize the shareholder’s wealth by adopting sustainable procedures. The existence of the CSR committee increases the confidence of investors in the firm’s fund management [32]. A CSR committee composition reduces the agency problems (conflict of interest between the principal (owner) and agent (manager)) in the company [25]. The CSR committee has an impact on the different types of qualitative and quantitative characteristics of the firm. For this reason, the existence of a CSR committee improves the firm’s overall responsible behavior [31]. Cumulatively, this subsection highlights the importance of the CSR committee and how its existence earns sustainable performance for shareholders and other stakeholders.

2.3. Environmental Performance

As we discussed, the CSR committee improves the firm’s CSR and has a greater impact on the firm’s financial performance. The firm’s CSR performance is constructed on three main pillars, including environmental, social, and governance, that combined are named ESG. However, some prior CSR gurus consider governance as different from the core theme of the firm’s CSR [33,34]. In this section, we talk about the literature on environmental performance. Environmental performance has an important part of CSR.

The company’s responsibilities towards the natural environment protects natural resources and refers to how these resources are distributed within the social system. It includes different dimensions that are working for the economy such as product responsibility, climate change, emission reduction, and promoting green technologies [35,36]. Thus, an improvement in the mentioned factors shows a positive contribution towards the environmental quality [16].

However, the CSR committee and its effectiveness are vital to manage and monitor the company’s financial performance to safeguard the shareholder’s interests. In modern times, the major responsibility of the CSR committee is to control the carbon footprint in
energy firms [15]. That will help control the pollution and improve the environment in the energy firms, as well as in the country. In a sustainable environment, when the CSR committee makes a decision then their decision is very effective [30]. As a result, it increases the shareholder’s wealth as well as increases the profitability of the company and enhances the environmental performance. The effective presence of the CSR committee will control the carbon footprint more effectively to reduce operational and environmental costs [25]. Therefore, it is suggested that the presence of a CSR committee enhances the environmental performance of the energy sector. This research seeks to address the following hypothesis:

Hypothesis 1 (H1). CSR committee presence is positively associated with the environmental performance of energy firms.

2.4. Social Performance

Social performance is another important dimension of CSR engaging firms in a philanthropy activity that contributes to society. Social responsibility encompasses many aspects of the firms, how these firms affect the economy in terms of competition, community, employment quality, training, and development. Hence, social performance is the key factor for setting up a relationship between the business and society [16].

Furthermore, the importance of interaction between the CSR committee and corporate social performance has increased due to the CSR committee building a strong relationship with their stakeholders [15]. In another study, the researchers find that the profitability of firms with a CSR committee is higher than the firms without a CSR committee [25]. A most recent study shows that CSR committees are positively associated with community performance, human rights performance, and overall corporate social performance (CSP) [30]. As a result, it increases the profitability of the company as well as increases the shareholder’s wealth and enhances social performance [16,25]. However, the research has consistently shown that the CSR committee has a positive relationship with social performance. Therefore, the presence of CSR committees in the energy firms promotes a good social interaction with their stakeholders. This study aims to address the following research hypothesis:

Hypothesis 2 (H2). CSR committee presence is positively associated with the social performance of energy firms.

3. Sample and Method

3.1. Sample

For this research, the related data were gathered from four different databases. First, we deploy data from Asset4 ESG which is a well-renowned source among business researchers [37–39]. Second, we use company-level financial data from the Worldscope. The Worldscope database consists of different, firm-level quantitative and qualitative components. Third, we employ BoardEx for the CSR committee composition data. Finally, we also used some market base information (from Datastream) to effectively answer our main research question. Combined, the mentioned data sources help form our study sample.

Initially, we fetch data from different databases and merge all of them. Using a sample of 128,082 firm-year observations, we first retain all those companies that belong to the energy sector. To define the energy sector, we use a two-digit Standard Industrial Classifications (SIC) code [21]. We retain only those firms that are associated with Metal Mining (SIC 10), Coal Mining (SIC 12), Oil and Gas Extraction (SIC 13), Nonmetallic Minerals, Except Fuels (SIC 14), Petroleum and Coal Products (SIC 29) or Electric, Gas, and Sanitary Services (SIC 49). Second, we delete all those countries that have less than 10 observations. Third, we drop all the observations with the missing data. After applying these exclusion criteria, we end up with 6125 firm-year observations from the energy sector which belong to 45 countries from 2002 to 2017.
3.2. Environmental and Social Measures

Our main dependent variables make use of Thomson Reuters Asset4 ESG, which consists of three main ESG pillars namely environmental, social, and governance. Prior environmentally and socially responsible studies validated this database [40,41]. Asset4 ESG uses publicly available information to finalize more than 250 object indicators and is considered the world’s largest comparable, auditable, and systematic ESG database.

To accomplish this study, we deploy the Environmental (ENV) and Social (SOC) pillars of Asset4. These pillars are indexed from 0 (bad) to 100 (good). The environmental pillar consists of such factors that show the firm policies’ impact on land, water, and air including living and non-living creatures along with the ecosystem (e.g., product innovation, resources reduction, carbon footprint reduction, and use of low-carbon technologies). The social pillar includes factors such as the loyalty and trust of employees, customers, and society on a firm (e.g., community, human rights, diversity, employment quality, training and development, and health and safety). Therefore, we used environmental and social scores from Asset4 ESG ranging from 0 to 100.

3.3. CSR Committee

Our main explanatory variable is the CSR committee (CSR_com) existence. CSR_com is a binary variable, in which 1 shows the existence of the CSR committee and 0 presents the non-existence of the CSR committee [42,43]. We utilize BoardEx to fetch data related to the CSR committee and its composition. Furthermore, we also use the individual components of CSR_com composition that include the CSR committee size (COM_size), CSR committee gender (COM_gen), CSR committee tenure (COM_ten), and CSR committee independence (COM_ind). Appendix ‘A’ contains the detailed definitions and symbols.

3.4. Model

To test our hypothesis, we use the following models:

\[
ENV_{it} = \alpha_0 + \beta_1 \text{CSR}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{LEV}_{it} + \beta_5 \text{MTB}_{it} + \beta_6 \text{INS}_{own}_{it} + \beta_7 \text{Year}_{FE}_{it} + \beta_8 \text{Country}_{FE}_{it} + \epsilon_{it} \tag{1}
\]

\[
SOC_{it} = \alpha_0 + \beta_1 \text{CSR}_{it} + \beta_2 \text{SIZE}_{it} + \beta_3 \text{ROA}_{it} + \beta_4 \text{LEV}_{it} + \beta_5 \text{MTB}_{it} + \beta_6 \text{INS}_{own}_{it} + \beta_7 \text{Year}_{FE}_{it} + \beta_8 \text{Country}_{FE}_{it} + \epsilon_{it} \tag{2}
\]

where \(ENV\) is the environmental performance and \(SOC\) is the social performance in Equations (1) and (2), respectively. \(CSR_{com}\) is the existence of a firm’s CSR committee. Further, following prior studies on environmental and social performance [44–47], we also control for variables that may influence the dependent variables. Our key control variables are firm size (\(SIZE\)), return on assets (\(ROA\)), leverage (\(LEV\)), market to book (\(MTB\)), institutional ownership (\(INSown\)), along with the year and country fixed effects. Appendix A contains the definitions and symbols of all the control variables.

4. Results and Discussion

4.1. Country-Wise Summary

Table 1 depicts the average values of countries used in our model variables, related to the energy sector data of 45 countries covering 16 years from 2002 to 2017, presented in our sample. Our final sample consists of most of the world-leading economies. In Table 1, the United States, Canada, and Australia show the highest value of observations in our population as 30%, 20%, and 13.38%, respectively relative to other countries in the sample. Therefore, these developed countries not only believe in an ethical sustainable environment and social practices but also require stringent regulatory disclosures in the annual reports [48]. The environment and social practices embedded in the corporate culture of the energy sector include Austria (89% and 93%), Spain (86% and 90%), and Italy (86% and 85%), etc. Next, most of the energy firms in Canada, Portugal, Saudi Arabia, and South Africa, etc. have the presence of the CSR committee that helps effectively implement the environmental and social policies.
Table 1. Country-wise summary.

| No. | Country            | Obs  | ENV  | SOC  |
|-----|--------------------|------|------|------|
| 1   | ARGENTINA          | 12   | 0.30 | 0.35 |
| 2   | AUSTRALIA          | 820  | 0.30 | 0.33 |
| 3   | AUSTRIA            | 23   | 0.89 | 0.93 |
| 4   | BELGIUM            | 16   | 0.59 | 0.70 |
| 5   | BERMUDA            | 46   | 0.27 | 0.39 |
| 6   | BRAZIL             | 86   | 0.65 | 0.75 |
| 7   | CANADA             | 1319 | 0.39 | 0.40 |
| 8   | CHILE              | 11   | 0.49 | 0.61 |
| 9   | CHINA              | 141  | 0.46 | 0.48 |
| 10  | COLOMBIA           | 18   | 0.70 | 0.83 |
| 11  | CZECH REPUBLIC     | 10   | 0.63 | 0.71 |
| 12  | DENMARK            | 13   | 0.85 | 0.60 |
| 13  | FINLAND            | 17   | 0.80 | 0.76 |
| 14  | FRANCE             | 148  | 0.74 | 0.74 |
| 15  | GERMANY            | 44   | 0.70 | 0.76 |
| 16  | GREECE             | 33   | 0.73 | 0.78 |
| 17  | HONG KONG          | 100  | 0.45 | 0.45 |
| 18  | INDIA              | 95   | 0.73 | 0.75 |
| 19  | INDONESIA          | 33   | 0.69 | 0.80 |
| 20  | IRELAND            | 14   | 0.31 | 0.38 |
| 21  | ITALY              | 46   | 0.86 | 0.85 |
| 22  | JAPAN              | 25   | 0.77 | 0.64 |
| 23  | KOREA (SOUTH)      | 14   | 0.86 | 0.84 |
| 24  | MALAYSIA           | 33   | 0.46 | 0.61 |
| 25  | MEXICO             | 26   | 0.65 | 0.79 |
| 26  | NETHERLANDS        | 57   | 0.63 | 0.71 |
| 27  | NEW ZEALAND        | 22   | 0.37 | 0.41 |
| 28  | NORWAY             | 41   | 0.54 | 0.58 |
| 29  | PAPUA NEW GUINEA   | 16   | 0.39 | 0.50 |
| 30  | PERU               | 10   | 0.48 | 0.39 |
| 31  | PHILIPPINES        | 12   | 0.55 | 0.53 |
| 32  | POLAND             | 53   | 0.54 | 0.59 |
| 33  | PORTUGAL           | 12   | 0.74 | 0.90 |
| 34  | RUSSIAN FEDERATION | 108  | 0.70 | 0.70 |
| 35  | SAUDI ARABIA       | 13   | 0.71 | 0.45 |
| 36  | SINGAPORE          | 33   | 0.51 | 0.50 |
| 37  | SOUTH AFRICA       | 101  | 0.64 | 0.79 |
| 38  | SPAIN              | 108  | 0.86 | 0.90 |
| 39  | SWEDEN             | 14   | 0.40 | 0.65 |
| 40  | SWITZERLAND        | 48   | 0.42 | 0.46 |
| 41  | THAILAND           | 26   | 0.71 | 0.86 |
| 42  | TURKEY             | 14   | 0.82 | 0.77 |
| 43  | UNITED ARAB EMIRATES | 15 | 0.26 | 0.49 |
| 44  | UNITED KINGDOM     | 444  | 0.55 | 0.64 |
| 45  | UNITED STATES      | 1835 | 0.48 | 0.48 |
|     | Total              | 6125 | 0.48 | 0.51 |

4.2. Descriptive Statistics

Table 2 explains the mean, standard deviation, minimum and maximum statistics. In this table, we analyze the descriptive statistics of our main dependent (environmental and social performance), independent (CSR committee, CSR committee size, CSR committee gender, CSR committee tenure, and CSR committee independence), and control variables.
Table 2. Descriptive statistics.

| Var       | Obs | Mean | Std  | Min  | Max  |
|-----------|-----|------|------|------|------|
| Dependent variable |     |      |      |      |      |
| ENV       | 6125| 0.481| 0.289| 0.086| 0.973|
| SOC       | 6125| 0.508| 0.310| 0.039| 0.992|
| Independent variable |     |      |      |      |      |
| CSR_com   | 6125| 0.437| 0.496| 0.000| 1.000|
| COM_size  | 2673| 4.589| 1.663| 1.000| 16.000|
| COM_gen   | 2391| 27.314| 32.590| 0.000| 100.000|
| COM_ten   | 2206| 3.201| 2.177| 0.250| 13.000|
| COM_ind   | 2660| 88.926| 19.099| 0.000| 100.000|
| Control variable |     |      |      |      |      |
| SIZE      | 6125| 15.781| 2.355| 9.217| 23.749|
| ROA       | 6125| 2.287| 13.223| −66.050| 35.860|
| LEV       | 6125| 0.718| 1.161| −4.108| 9.552|
| MTB       | 6125| 0.002| 0.003| −0.005| 0.026|
| INS_own   | 6125| 5.247| 7.795| 0.000| 92.000|

The statistics in Table 2 show that on average, energy firms from 45 countries achieved a 48% level of environmental and 51% level of social performance. Additionally, 43% of energy firms have a CSR committee that consists of five members on average, 27% of female board members with three years of CSR committee experience, and 89% of independent board members are a part of the CSR committee. The descriptive statistics of the other control variables indicate that the mean value of the firm size is 15.78 with a standard deviation of 2.3, as calculated by the natural logarithm of total assets. For the return on assets, the mean value is 2.3 with a standard deviation of 13.22, as calculated by the net income scaled by the total assets. The mean value of the institutional investor’s ownership is 5.25 with a standard deviation of 7.8. On the other hand, the mean value of leverage as the total debts divided by the total assets is 0.72 with a standard deviation of 1.2. In addition, the mean value of the market to book value of the firm is 0.002 with a standard deviation of 0.07.

4.3. Correlation Matrix

We use the correlation matrix in our analysis to measure the strength and direction of the linear relationship between our dependent variables with the independent and control variables. We apply the Variance Inflation Factor (VIF) and the maximum VIF is 3.64. Generally, a VIF value below 10 shows the absence of multicollinearity concern.

Table 3 explains the results of the correlation matrix of our main variables. The environmental and social performance has a positive significant correlation with the CSR committee, CSR committee size, and CSR committee tenure. This shows that energy firms are more interested and motivated in monitoring and assessing environmental and social activities in the presence of an independent CSR committee [25,46]. While the environmental and social performance has a significant negative relationship with the committee’s gender diversity [13,49,50]. In addition, the energy sector is more concerned with environmental factors where risky decisions are made in order to be eco-friendly and reduce environmental footprints. Moreover, environmental and social factors have a significant negative relationship with the firm’s market value concerning the firms’ book value, since the intrinsic value of the company share is affected by the opportunity cost of extra CSR activities and agency cost [51]. Further, the environmental and social performance also has a strong negative relationship with the institutional shareholder’s ownership since a firm’s choice to commit to social responsibility does not have a significant effect on the investment decision of institutional investors in general [52], while the CSR committee’s independent insignificant relation is present.
### Table 3. Correlation matrix and variance inflation factor (VIF).

| Var     | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | VIF  |
|---------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| (1) ENV | 1.000          |     |     |     |     |     |     |     |     |      |      |      |      |
| (2) SOC | 0.846 *        | 1.000 |     |     |     |     |     |     |     |      |      |      | 1.37 |
| (3) CSR_com | 0.193 * | 0.216 * | 1.000 |     |     |     |     |     |     |      |      |      |      |
| (4) COM_size | 0.225 * | 0.224 * | -0.063 * | 1.000 |     |     |     |     |     |      |      |      | 1.22 |
| (5) COM_gender | -0.302 * | -0.338 * | -0.003 | -0.003 | 1.000 |     |     |     |     |      |      |      | 1.19 |
| (6) COM_ten | 0.073 * | 0.086 * | 0.072 * | -0.003 | 1.000 |     |     |     |     |      |      |      | 1.46 |
| (7) COM_ind | 0.039 | 0.031 | -0.149 * | 0.056 * | 0.214 * | 1.000 |     |     |     |      |      |      | 1.51 |
| (8) SIZE_w | 0.587 * | 0.566 * | 0.104 * | 0.232 * | -0.200 * | 0.093 * | 0.001 | 1.000 |     |      |      |      | 3.64 |
| (9) ROA_w | 0.178 * | 0.182 * | 0.005 | 0.071 * | -0.003 | -0.030 | -0.032 | 0.310 * | 1.000 |      |      |      | 1.34 |
| (10) LEV_w | 0.123 * | 0.101 * | -0.005 | 0.001 | -0.072 * | 0.033 | 0.009 | 0.154 * | 0.005 | 1.000 |      |      | 1.50 |
| (11) MTB_w | -0.077 * | -0.065 * | -0.099 * | -0.025 | -0.013 | -0.072 * | -0.048 | -0.130 * | 0.072 * | 0.281 * | 1.000 | 1.38 |
| (12) INS_own | -0.125 * | -0.119 * | 0.008 | 0.010 | 0.019 | 0.103 * | 0.032 | -0.143 * | -0.014 | 0.043 * | 0.020 | 1.000 | 1.24 |

* Symbolizes significance at 1%, respectively.

#### 4.4. CSR Committee Attributes Impact on Environmental and Social Performance

We use the ordinary least square method that shows the relationship between dependent and independent variables.

Table 4 shows the relationship between the CSR committee and the environmental performance of the firms, while keeping the time and country fixed effect. The first column shows that the presence of the CSR committee has a significant positive influence on the environmental performance of the energy sector companies. In response, the CSR committee is helpful in carbon footprint reduction, effective utilization of non-renewable natural resources, and environmentally-friendly production [53]. In the second column, the CSR committee size also shows a positive significant relationship with the environment, as the increasing number of committee members synergizes their opinion and oversight of environmental matters in the company. In the third column, gender diversity shows a reverse relation with environmental performance, which might be due to the fewer opportunities for females in the energy sector (48% in the global labor force—only 22% in the traditional energy sector and the numbers are even lower at the management level) [54]. Further, we investigate this surprising result by deploying two alternate proxies of gender diversity that are more frequent in governance literature. First, we use a female dummy that contains a value of 1 if a firm has at least one female in the CSR committee [55]. Then, the female dummy shows the same association as shown in our main results. Second, we deploy another dummy that has a value of 1 if a firm has at least three females on their CSR committee by following the critical mass theory [56]. We find that if the energy firms follow this critical mass effect and include three or more females in their CSR committee, then their voices are more effective in improving the firm’s overall sustainable policies (results will be provided upon request). The fourth column in Table 4 shows a significant positive opinion of the CSR committee’s tenure in terms of members’ experience with environmental performance since the experience and exposure of the CSR committee adds value to the environmental issues, forecasting, and sustainability [25,57]. The CSR committee members’ independence does not show any relation with the environmental performance of the company in the fifth column, as environmental issues are critical for all the stakeholders irrespective of the independence of the committee members.

The social performance of the company is critical for the sustainability of the company to be a good corporate citizen. In the sixth column in Table 5, social performance has a significant positive relationship with the CSR committee since the existence of this committee also focused on social issues alongside environmental issues. The CSR committee size and tenure have a significant positive relationship with the corporate social performance, since the committee member’s experience and expertise to oversight social activities along with labor laws and their implications, saves the company from litigation costs and boosts the social sustainable image of the energy sector companies [57].
Table 4. CSR (corporate social responsibility) committee and environmental performance.

| Var    | ENV          |
|--------|--------------|
|        | (1)          | (2)          | (3)          | (4)          | (5)          |
| SIZE   | 0.103 ***    | 0.108 ***    | 0.109 ***    | 0.113 ***    | 0.112 ***    |
|        | (0.84)       | (34.94)      | (34.30)      | (33.26)      | (36.75)      |
| ROA    | −0.001 ***   | −0.001 ***   | −0.001 ***   | −0.001 **    | −0.001 ***   |
|        | (−4.72)      | (−2.60)      | (−3.39)      | (−2.17)      | (−2.74)      |
| LEV    | −0.013 ***   | −0.011 ***   | −0.014 ***   | −0.011 ***   | −0.013 ***   |
|        | (−5.41)      | (−2.91)      | (−3.44)      | (−2.77)      | (−3.24)      |
| MTB    | 6.116 ***    | 10.594 ***   | 12.019 ***   | 12.688 ***   | 10.718 ***   |
|        | (5.57)       | (5.06)       | (5.19)       | (5.20)       | (5.09)       |
| INS_own| −0.001 ***   | −0.000       | −0.000       | −0.000       | −0.000       |
|        | (−2.85)      | (−0.38)      | (−0.22)      | (−0.67)      | (−0.36)      |
| CSR_com| 0.054 ***    | 0.012 ***    |              |              |              |
|        | (9.33)       | (5.03)       |              |              |              |
| COM_size|            |              | −0.001 ***   |              |              |
|        |              |              | (−6.98)      |              |              |
| COM_gen|              |              |              | 0.009 ***    |
|        |              |              |              | (4.23)       |
| COM_ten|              |              |              |              | 0.000        |
|        |              |              |              |              | (0.68)       |
| COM_ind|              |              |              |              |              |
|        |              |              |              |              |              |
| Constant| −1.753 ***  |
|        | (−13.66)     |
|        | −1.773 ***   | (−8.84)      |
|        | −1.059 ***   | (−15.56)     |
|        | −1.111 ***   | (−16.07)     |
|        | −1.814 ***   |
|        | (−8.99)      |
| Obs    | 6125         | 2673         | 2391         | 2206         |
|        |              |              |              |              |
| Year FE| Yes          | Yes          | Yes          | Yes          |
| Country FE|        | Yes          | Yes          |
| Adj R² | 0.568        | 0.550        |
|        | 0.547        |
|        | 0.545        |
|        | 0.545        |

* Symbolizes significance at 10%, respectively; ** symbolizes significance at 5%, respectively; *** symbolizes significance at 1%, respectively.

Table 5. CSR committee and social performance.

| Var    | SOC          |
|--------|--------------|
|        | (6)          | (7)          | (8)          | (9)          | (10)         |
| SIZE   | 0.111 ***    | 0.112 ***    | 0.112 ***    | 0.119 ***    |
|        | (50.02)      | (33.18)      |
| ROA    | −0.001 **    | −0.001       | −0.001 **    |
|        | (−2.22)      | (−1.37)      |
| LEV    | −0.009 ***   | −0.006       | −0.014 ***   |
|        | (−3.45)      | (−1.36)      |
| MTB    | 7.258 ***    | 12.839 ***   | 15.165 ***   | 13.616 ***   |
|        | (6.04)       | (6.62)       |
| INS_own| −0.001 ***   | 0.000        |
|        | (−2.70)      | (0.06)       |
| CSR_com| 0.076 ***    |
|        | (12.10)      |
| COM_size|            |              |              |
|        |              |              |              |
| COM_gen|              |              | −0.001 ***   |
|        |              |              | (−9.03)      |
| COM_ten|              |              |              |
|        |              |              |              |
| COM_ind|              |              |              | 0.011 ***    |
|        |              |              |              | (4.33)       |
|        |              |              |              | 0.000 *      |
|        |              |              |              | (1.82)       |
4.5. Additional Analysis

To extend our analysis, we use a unique attribute (CEO duality) of corporate governance that plays a key role in forming a CSR committee, since the CEO power and performance can be classified as an opportunity for decision making and strengthening the relationship with shareholders. Moreover, CEO duality can be classified as a specific CEO power variable in terms of CSR characteristics [58], while the CEO has more possibilities and power to implement a sustainable strategy for improving environmental and social performance [31,46]. It may be used opportunistically according to the stakeholder agency theory.

Table 6 illustrates the results with subsamples of existence and non-existence of CEO duality. Panel A explains the results for the CSR committee characteristics and environmental performance. In panel A, the results show that experienced committee members and the strength of independent directors on the CSR committee do not affect the environmental performance in the presence of a more powerful CEO. Since the CSR committee improves environmental performance with implications of policies and strategies for sustainable development, health, and safety, and work as a public responsible committee when the CEO does not control the board, whereas panel B represents social performance as our main dependent variable. Here, we also find the same level of association between the CSR committee attributes and social performance when a firm has a more powerful CEO. However, when the CEO is not holding the board chair then experienced members on the CSR committee are more effective to take on social initiatives since firms are more concerned about people and society. Thus, the CSR committee overall improves environmental and social performance, when the firms have a dual structure of leadership.

Table 6. Role of CEO duality.

| Var      | (6)     | (7)     | (8)     | (9)     | (10)     | (11) | (12) | (13) | (14) | (15) | (16) | (17) | (18) | (19) | (20) |
|----------|---------|---------|---------|---------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Constant | −2.019 *** | −2.042 *** | −1.190 *** | −1.306 *** | −2.113 *** | (−14.39) | (−9.35) | (−16.06) | (−17.18) | (−9.58) | | | | |
| Obs      | 6125    | 2673    | 2391    | 2206    | 2660    |       |       |       |       |       |       |       |       |       |
| Year FE  | Yes     | Yes     | Yes     | Yes     | Yes     |       |       |       |       |       |       |       |       |       |       |
| Country FE | Yes    | Yes     | Yes     | Yes     | Yes     |       |       |       |       |       |       |       |       |       |       |
| Adj R2   | 0.548   | 0.522   | 0.523   | 0.509   | 0.514   |       |       |       |       |       |       |       |       |       |

* Symbolizes significance at 10%, respectively; ** symbolizes significance at 5%, respectively; *** symbolizes significance at 1%, respectively.
Table 6. Cont.

| Var     | CEO_dua = 1 | CEO_dua = 0 |
|---------|-------------|-------------|
|         | (21)       | (22)       | (23)       | (24)       | (25)       | (26)       | (27)       | (28)       | (29)       | (30)       |
| CSR_com | 0.059 ***   | 0.056 ***   |
|         | (6.28)      | (7.77)      |
| COM_size| 0.013 ***   | 0.012 ***   |
|         | (3.11)      | (4.07)      |
| COM_gen | -0.001 ***  | -0.001 ***  |
|         | (-3.18)     | (-6.42)     |
| COM_ten | 0.003       | 0.016 ***   |
|         | (0.81)      | (5.76)      |
| COM_ind | -2.111 ***  | -2.147 ***  |
|         | (-13.28)    | (-8.89)     |
| Obs     | 2325        | 913         | 836        | 804        | 905        | 3797       | 1760       | 1555       | 1402       | 1755       |
| Control | Yes         | Yes         | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        |
| Year FE | Yes         | Yes         | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        |
| Country | Yes         | Yes         | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        |
| FE      | Yes         | Yes         | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        | Yes        |
| Adj R²  | 0.550       | 0.517       |
|         | 0.511       | 0.498       |
|         | 0.510       | 0.603       |
|         | 0.586       | 0.588       |
|         | 0.597       | 0.582       |

* Symbols signify significance at 10%; ** symbolizes significance at 5%; *** symbolizes significance at 1%, respectively.

5. Conclusions

In this paper, we investigate how the CSR committee impacts environmental and social performance. Our study contributes to the sustainable development literature in two ways. First, we provide evidence of why the presence of the CSR committee is specifically important for the various sustainability-related outcomes. Prior studies have established a significant impact on the firm’s non-financial performance in terms of environmental and social dimensions [25]. Our study extends this line of inquiry by suggesting that firms with CSR committees are more effective in improving social conditions and supporting environmental performance initiatives (such as carbon footprints). Second, our findings stress that more experienced and large CSR committees are more effective in improving the firm’s social welfare and mitigating carbon footprints. Additionally, we also check this association with the presence and absence of the CEO duality characteristic of the board. Combined, this paper shows that environmental and social claims of stakeholders improve with the presence of CSR committees in energy firms.

As a result, we can extract practical implications on the importance of CSR committees that can enhance the non-financial performance of the company. Increasing the participation and presence of the CSR committee helps meet the needs of all the stakeholders and improves the transparency actions [32]. According to the obtained results, it can be inferred that CSR committees are the efficient participatory bodies in firms to ensure the principles for environmental and social concerns. Our findings can serve as a guide for all energy sector firms (metal mining, coal mining, oil and gas extraction, nonmetallic minerals, except fuels, petroleum, coal products or electric, gas, and sanitary services) that want to implement sustainable policies, knowing that the CSR committee controls, monitors, and promotes sustainable behavior for the firms [59]. Lastly, our findings help the practitioner favorably achieve the SDG 7, SDG 8, and SDG 13 with the help of an effective CSR committee.

Limitations and Research Directions

This study has certain limitations. First, the current research tried to consider the energy sector to test the hypothesis. According to the energy researchers, this sector pollutes the environment and affects society on a large scale. However, findings with environmentally-friendly firms may differ from our main results. Second, our final sample comprises energy sector firms from 45 countries over 2002–2017, while this association may change in a crisis (such as COVID-19). Third, most of the concerned data come from advanced and emerging
economies. Therefore, we cannot generalize our results to other under-developed countries. Finally, our findings show that the CEO duality changes the association among the CSR committee characteristics and the firms’ environmental and social performance [59]. How other board characteristics may affect this relationship is still a gap. Thus, these are the limitations of the study that restrict the research and hence our sample results.

Our findings provide some future research directions. First, our findings are generalized for the energy sector. However, other implications for various sectors should be included in future research designs in line with CSR characteristics to test the environmental and social performance. Second, the recent stream of research and widespread application of the open innovation concept would be extremely relevant for measuring the CSR committee link for the firm’s effects, before and after 2016 (The Paris Agreement). Third, green innovation is a way to improve environmental performance that deals with green plantation and refers to the innovation in technology applied to minimize wastage, global warming, and use of water, coal, oil, electricity, and conserving energy [60,61]. It also enhances social performance development in terms of people and society at large, which is driven by the community, diversity, and employee relations. Thus, this relation is more prevalent in firms with strong governance mechanisms and therefore important for future decisions [20].

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Appendix A

| Variable Name     | Symbol  | Definition                                                                 |
|-------------------|---------|-----------------------------------------------------------------------------|
| **Dependent variable** |         |                                                                             |
| Environmental performance | ENV      | Environmental scores from Asset4 ESG range from 0 to 100.                     |
| Social performance | SOC     | Social scores from Asset4 ESG range from 0 to 100.                           |
| **Independent variable** |         |                                                                             |
| CSR committee     | CSR_com | Dummy variable that takes a value of 1, if the firm has a CSR committee.     |
| CSR committee size | COM_size | The number of board of directors in the CSR committee.                      |
| CSR committee gender | COM_gen | The ratio of female directors over total directors in the CSR committee.     |
| CSR committee tenure | COM_ten | The average number of CSR committee experience of all members.              |
| CSR committee independence | COM_ind | The ratio of independent directors to total directors in the CSR committee. |
| **Control variable** |         |                                                                             |
| Firm size         | SIZE    | Natural log of total assets.                                                |
| Profitability     | ROA     | Net income scaled by total assets.                                          |
| Firm leverage     | LEV     | Total debt divided by total assets.                                         |
| Market to book    | MTB     | The market value of a firm over the book value of a firm.                   |
| Institutional ownership | INS_own | Dummy variable that takes a value of 1, if the firm has more than 5% of shares held by institutional investors. |
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