The Association of Board Characteristics and Corporate Social Responsibility Disclosure Quality: Empirical Evidence from Pakistan

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Abstract: Earlier research has shown that the makeup of the corporate board is a crucial predictor in meeting stakeholder accountability expectations through voluntary Corporate Social Responsibility (CSR) disclosure. Though scholars have identified substantial relationships between board composition and CSR disclosure, the majority of their focus has been on the ‘quantity’ of CSR disclosure rather than the ‘quality’. Therefore, the present study considers the association of board characteristics (such as gender diversity, independence, female chairperson or/and female CEO, and board size) and the quality of CSR disclosure of the top 100 Pakistan Stock Exchange (PSX)-listed companies. We conducted content analysis of secondary Corporate Governance (CG) and CSR data extracted from the annual reports of PSX-listed companies across ten industrial sectors from the period 2017 to 2018. Our empirical investigation through univariate and multiple regression analysis with ordinary least squares (OLS) techniques revealed that all the board characteristics potentially had a significant association to lower CSR disclosure quality. Using the 2SLS regression model, we addressed the endogeneity issue of board characteristics and found robust results. One of the important implications of our findings is that policymakers and regulators in developing countries like Pakistan should review the value of board qualities as outlined in CG principles and develop stronger mechanisms to improve numbers of female directors and nonexecutive directors’ independence. We acknowledge several research limitations, including the study time period and selected board characteristics. While our study has provided some understanding of the association of board characteristics with CSR disclosure quality of PSX-listed companies, several research gaps still need to be addressed. Future investigators should examine this association through the pre-COVID-19 and post-COVID-19 contexts and the inclusion of a systems theory perspective.

Keywords: board characteristics; gender diversity; board independence; female CEO; female chairperson; Corporate Social Responsibility (CSR); CSR disclosure quality

1. Introduction

Corporate Social Responsibility (CSR) and Corporate Governance (CG) are emerging concepts, gaining more acceptance with the passage of time. For companies that engage in CSR activities, these are intrinsically linked to the application of CG [1]. CSR-focused companies consider the financial as well as social and environmental impacts of their operation’s activities [2]; earlier studies, such as [3], have also supported the CSR argument and encouraged organizations to enhance their CSR efforts, recommending that they go beyond mandatory standards wherever feasible to embrace voluntary CSR initiatives (and,
in doing so, embrace a broader perspective of accountability). Companies are primarily encouraged to make voluntary CSR disclosures. There are several reasons for making voluntary disclosures, including the desire to boost investor confidence, better inform stakeholders, and possibly lower the risk or expense of litigation between stakeholders and the firm. Some benefits of CSR that are more frequently claimed include enhanced social acceptability, the development of a more favourable public image, and that difficulties related to social responsibility activities are properly managed [4,5].

The board of directors, as an important aspect of CG, plays a significant role in defining the company’s operational actions and strategic decisions, including CSR disclosure decisions. This implies that CSR disclosure is an essential part of the board of directors’ decision-making processes, driven by stakeholder requirements [6] and restricted by available resources [7]. The increased focus on CG and CSR by the media, government, non-governmental organizations, and other key stakeholders has also modified the typical board inclination to include more than simply shareholders’ interests. Other stakeholders’ interests and shareholders’ interests are now incorporated in the board’s concerns [8].

The board is intended to oversee and advise company management on issues such as risk management and disclosure duties, including CSR disclosure [9]. Members of the board of directors are supposed to have the necessary expertise, skills, and credibility for this. This is believed to allow corporations to create governance structures capable of meeting the interests of key stakeholders [10,11]. This paper argues that corporations should reconsider the board composition they previously designed to protect shareholders’ interests, in order to address more significant issues. The board has monitoring, managing, advising, and providing accountability responsibilities to shareholders as well as other stakeholders. Corporate disclosures, such as CSR disclosures, are used by boards to discharge responsibilities to stakeholders.

Recent research, such as Riaz, et al. [12], has noticed an increase in CSR disclosures. However, this rise in disclosure has not always mirrored real company performance since the information given may be a management response to perceived stakeholder demands or minor tweaks for disclosure quality, giving the illusion of satisfying accountability responsibilities [13,14]. This calls into question the legitimacy of CSR disclosures. According to recent research, the makeup of a board is a crucial predictor in meeting stakeholder accountability expectations through voluntary CSR disclosure [7,15].

Board diversity is critical for stakeholders and CSR disclosure [16]. A diverse board is considered to have a good influence on the board’s tasks (monitoring, controlling, and advising management), such as achieving stakeholder accountability expectations [17]. According to Hassan, et al. [9], a more diverse board will be more aware of the expectations of society’s many sectors and will endeavour to fulfill these demands. Several board qualities, including gender diversity and independence, have received more attention in research in recent years and have been explicitly adopted into practice. For example, in terms of board gender diversity, Norway and other European countries were among the first to establish female board quotas. Some other countries like Australia followed them and declared gender diversity on the board of directors and at senior management levels [18]. Similarly, in terms of board diversity and independence, the CG code of corporate governance by SECP in 2017 mentioned that listed companies should have female directors on the board and at least one-third of total board members who are independent, or two independent directors on the board [19].

Though scholars have identified substantial relationships between board diversity and CSR disclosure, the majority of their focus has been on the ‘quantity’ of CSR disclosure rather than the ‘quality’ [20,21]. Similarly, there is a plethora of CSR research on developed economies as compared to CSR research on developing countries [22]. The implications of CG characteristics on CSR reporting are anticipated to vary between developed and developing nations due to varied institutional, political, social, and cultural settings [23], hence the need to investigate this further. Realizing this, the aim of our study is twofold. The first aim is to focus on the ‘quality’ of CSR disclosure(s) while finding its association
with board characteristics comprising variables such as gender, board independence, female chairperson, female CEO, and board size. The second aim is to explore this relationship in the context of a developing country such as Pakistan.

The context of Pakistan provides an interesting scenario for CSR disclosure research, particularly regarding the quality of disclosure. For example, prior research [24–28] has discovered that companies in Pakistan operate in the context of several CSR issues, such as unfair wages, child labour, human rights violations, and poor living conditions. Similarly, according to the World Bank’s study on environmental analysis published in 2022, significant investments in climate resilience are urgently needed to protect Pakistan’s economy and alleviate poverty [29]. The motivation to study CSR in the context of Pakistan is also important because prior research, such as Fatima [30], has found the notion of CSR to have been long neglected in Pakistan since firms from all industries were too undeveloped to properly perform their CSR duties as included in the definition of CSR. From the gender diversity perspective, Pakistan also provides an interesting case. Pakistan’s gender equality rating remains among the lowest in the world [31]. According to the Global Gender Gap Report 2022, Pakistan ranks second-to-last in the gender parity index [32], and gender disparity influences the nomination of women to boards [33].

One of the primary contributions of our study is to support the pursuit of sustainability by giving more insight from the context of developing nations and contributing to the available CSR literature in a unique way by evaluating the impact of board membership on CSR disclosure ‘quality’, as compared to available studies which paid more attention to ‘quantity’. Our empirical investigation supports this study’s contribution to the pursuit of sustainability, as it considers governance practices that may promote or hinder sustainability efforts. Our findings could create rules/policies encouraging companies to adopt board practices that improve CSR disclosures, thereby advancing sustainability goals. Moreover, we determined that existing notions of best practice in CG concerning board characteristics deemed to enhance sustainability vary around the world. As a result of our study’s empirical investigation, various regional variations of CG best practice regarding sustainability can be explored. Another contribution to sustainability research is the subject of our study, ‘CSR disclosure quality,’ which clearly enhances transparency and assesses the level of seriousness of companies, particularly those in poor countries, in supporting sustainability programmes. As developing countries like Pakistan seek foreign direct investment, there is a great demand for more transparent CSR information to help investors, stakeholders, and the public make better-informed decisions. Eventually, this will increase investment in sustainable enterprises, fostering corporate sustainability. Overall, our findings provide vital support to a line of research which seeks to gain a deeper understanding of the links between and creation of distinctive approaches to sustainability in the corporate sector. Thus, through our findings, the decision-makers of various industries in Pakistan may learn about the state of CSR and the improvement required. This may change the governance structures and board composition norms of industries in Pakistan. Our findings necessitate a fresh focus on clear and comprehensive reporting in Pakistan.

The rest of the paper structure is as follows: Section 2 focuses on the context of this study, Pakistan. Section 3 presents the relevant literature and develops the hypothesis of the relationship between board characteristics and CSR disclosure quality. The empirical research design of this study is discussed in Section 4. Section 5 covers the related findings along with discussion of them. Finally, Sections 6 and 7 provide the conclusion and the implications, limitations, and recommendations for future research, respectively.

2. Brief Overview of Important CG–CSR Arrangements in Pakistan

Due to, in particular, its two rounds of CG reforms, Pakistan offers a special context for research in the CG area. These changes were intended to attract foreign direct investment and to put in place worldwide best practice in corporate governance [34]. The first CG code was developed in 2002 and was replaced by the CG code of 2012. SECP made many amendments to the CG Code 2012, and a number of areas, including disclosure and
transparency, was more specifically addressed [34]. Later, for the first time in the history of Pakistan’s CG codes and standards, the SECP addressed gender diversity on corporate boards in 2016 and advised each corporate board to include at least one female director. This version of the CG code addressed the composition and structure of the board to improve board independence, managerial supervision, gender diversity, and risk assessment.

Furthermore, the notion of a risk management committee was developed to oversee risk management and corporate governance activities. Companies listed on the Pakistan Stock Exchange had to follow the amended 2016 Code [19].

New regulations that superseded the CCG 2012 and aimed to harmonize CG practices were released by SECP in November 2017. In order to improve independent decision-making, new regulations were developed, and the board’s position and duties were made clearer and more evident. The board’s gender diversity was established and supported, and the system for accountability and openness was strengthened by greater disclosure standards [35,36]. However, these CG guidelines received some changes later in 2018 by SECP in a number of areas, including CSR disclosures [35].

In the case of Pakistan, the Companies Act of 2017, which superseded the previous Companies Ordinance of 1984, was a significant legislative breakthrough and also supported the obligation for a gender quota on the boards of listed companies. Furthermore, following this Act, Pakistan made CSR expenditure mandatory for certain types of corporations in 2017. This criterion requires eligible businesses to spend a share of their after-tax income on CSR initiatives. Before this, in 2013, SECP had issued voluntary CSR guidelines to encourage greater accountability in business ethics and corporate actions based on the interests of shareholders [37].

3. Literature Review and Development of Board Characteristics and CSR Disclosure Quality Hypotheses

3.1. CG, CSR and CSR Disclosure Quality

CG and CSR are two separate yet interrelated ideas. Although these concepts possess unique areas of emphasis, there is often an overlap and mutual influence between them [38]. For instance, CSR refers to a corporation’s acts to benefit society which go beyond the law’s requirements and the corporation’s primary goal, which is to act in the shareholder’s interest [39]. In contrast, CG is a framework for preserving accountability and aligning the corporation’s aims with those of its stakeholders [40]. CG encompasses a set of processes, principles, and values that impact corporate behaviour and decision-making associated with CSR. Effective CG places a strong emphasis on the principles of accountability and transparency. According to Adel, et al. [41], companies that possess well-established governance structures are more likely to possess resilient mechanisms for transparently disclosing their CSR activities, thereby enhancing the quality of their CSR disclosures. They typically demonstrate a greater level of sensitivity towards the requirements and anticipations of their stakeholders, as evidenced by their commitment to revealing social and environmental repercussions to their stakeholders [42]. The quality of CSR disclosures can also serve as an indicator of a company’s risk management efforts, which are an important part of CG [43], and its commitment to creating sustainable value through addressing social and environmental concerns [44]. Companies that adhere to robust CG practises are typically more capable of generating CSR disclosures of superior quality, which serve as a testament to their dedication to ethical and responsible business conduct.

CSR is a complex and multifaceted concept that encompasses the disclosure of information pertaining to a wide range of actions and accomplishments. These include performance metrics, objectives, and projects across the economic, environmental, and social domains. According to [45], the quality of released information is contingent upon its utility to the intended users. In the context of company CSR, the term ‘quality’ can be defined as the level of transparency that enhances consumers’ ability to evaluate the social and environmental consequences of company actions [46]. According to [47], an assessment of disclosure quality can be conducted by examining the qualitative attributes
of relevance, verifiability, neutrality, comparability, and clarity of the disclosed material. In a similar vein, where the given information is deemed trustworthy and capable of holding senior management responsible for the consequences of their choices, it can be considered to possess a high level of quality [48]. In the context of CG, senior management takes the corporate board’s recommendations. Because of the nature of board responsibilities, collaborative work is required, which benefits directors with different experience who are expected to play a vital part in corporate strategic decision-making processes [49]. Thus, research into the quality of earlier CSR disclosure has taken into account the influence of board diversity features [7,50,51]. Gender, board independence, female chairperson, female CEO, and board size have all been studied in previous research [8,52–54]

3.2. Gender Diversity

Greater gender diversity on corporate boards may increase the relevance of and degree of faithful representation in CSR disclosures because females have different personality characteristics and values in CSR subjects than males [55–57]. Female directors may also be more sensitive to social and environmental activities [58–60], and their particular leadership style may contribute more to the quality of CSR disclosure [61]. An increase in the number of female board directors, for example, raises the likelihood of varied boardroom talks concerning stakeholder expectations [62]. Discussions on stakeholder expectations that are diverse and educated are more likely to contribute to the relevance aspect of CSR disclosure quality. The relevance component of CSR disclosure quality includes CSR strategy, CSR risks, stakeholder involvement, and overall CSR performance disclosures. In comparison to male directors, growth in the number of female board directors has boosted the relevance component of CSR disclosure quality; female directors have been observed to have a broader stakeholder orientation [63].

Gender diversity on corporate boards is expected to result in stronger CSR benefits, such as higher CSR disclosure quality. This study expects to find a positive relationship between a board’s gender diversity and CSR disclosure quality, which would be consistent with previous research findings [17,64–69]. The following hypothesis is offered about gender diversity and the quality of CSR disclosure:

**Hypothesis 1 (H1): A positive association exists between board gender diversity and CSR disclosure quality.**

3.3. Board Independence

Independent directors are individuals who have positions on corporate boards but do not serve as executives or have any proprietary interests in the company [70]. This means directors on a corporate board will be independent, if they have no or very few conflicts of interest within the company operations, meaning they can act as “the stewards of the governance process” [71]. Board members with a stake in the company’s operations may collaborate with managers and evaluate performance unfairly. Board independence has been considered to be critical for boards in carrying out their responsibilities [72]. Boards benefit from independent directors’ impartial executive-director oversight [71]. The board of directors, for example, has a monitoring responsibility that involves questioning the CEO and other senior management on behalf of shareholders. Independent non-executive directors who are not affiliated with management are supposed to support the quality of CSR discourse and provide more ‘relevance’ in CSR disclosure. Independent board members are required to embrace stakeholders’ broader interests and work to match these interests with the company. Non-executive and independent directors may be anticipated to encourage companies to disclose voluntary information to stakeholders since they are less linked with corporate management [7,73].

Prior disclosure studies have indicated support for a larger number of independent board directors, lowering agency costs and putting pressure on management to reveal more information [74]. Since independent directors are often more interested in CSR than in a
With regard to board independence, the following hypothesis is proposed:

**Hypothesis 2 (H2):** A positive association exists between board independence and CSR disclosure quality.

### 3.4. Female Leadership

Before we develop any hypothesis regarding female leadership in companies, it is important to develop understanding of the roles of chairperson and CEO. The chairperson and the CEO are two different positions within a company, each carrying certain duties and obligations. Their responsibilities may exhibit variations contingent upon the organisational framework and governance practices of the company. Some earlier studies such as [77–79] have provided overarching distinctions in both roles and related perceptions. As per these studies, the chairperson is widely regarded as a symbolic leader within the board, tasked with maintaining principles of efficient governance and representing the interests of shareholders. On the contrary, the CEO is widely regarded as the person responsible for supervising the operational facets of an organisation, including its day-to-day administration and overall efficacy. Both roles are essential for the effective functioning of a firm, yet they need different skill sets and focus areas. Due to the natures of both roles, various characteristics of gender can have impacts on them, and this needs to be studied.

Previous studies [80,81] have claimed that top female executives are more successful than male leaders in integrating different stakeholder and shareholder interests. According to prior research [82,83], females have a substantial and positive effect on corporate decision-making, company success, and social performance.

Although both female CEOs and female chairpersons are anticipated to have a good influence, a study by Kang, et al. [84] found that a female chairperson is more acceptable than a female CEO. They discovered that when a female is put in an independent role, i.e., chairperson rather than a managerial position, the market reacts more positively. The nomination of a female chairperson and CEO has been linked to increased interest in conflict resolution and has been linked to increased CSR reporting [85]. According to Jiang and Akbar [86], firms with female chairs or CEOs prioritize CSR issues and concerns. With regard to female leadership roles, the following two hypotheses are proposed:

**Hypothesis 3 (H3):** A positive association exists between the chairperson being female and CSR disclosure quality.

**Hypothesis 4 (H4):** A positive association exists between the CEO being female and CSR disclosure quality.

### 3.5. Board Size

The total number of members on a corporate board is referred to as board size. The size of a board can have an impact on CG and CSR practices. Increased board size can have an influence on the board’s efficacy and efficiency since it can impede decision-making and raise the likelihood of a lack of unanimity [57]. On a bigger board, directors might engage in free-riding and dodge duties, allowing control to be concentrated in the hands of a few board members. This may have an adverse effect on CSR efforts and disclosure [87].

The overall effects of board size on CSR disclosure are mixed. Some research [57] has discovered a substantial and favourable association between board size and CSR disclosure, while others [22,88] have discovered a significant but negative relationship. We anticipate a positive relationship between board size and CSR disclosure quality. With regard to board size, the following hypothesis is proposed:
Hypothesis 5 (H5): A positive association exists between board size and CSR disclosure quality.

Figure 1 shows the conceptual model of our study, developed based on the above literature review of dependent and independent variables, as well as five control variables, which are covered in the next section.

4. Empirical Research Design

To test the five hypotheses developed to find the association of board characteristics and CSR disclosure quality, we used a quantitative research design. Data collection was completed from the secondary sources and various statistical analyses (see Section 5) were employed to develop our findings. The detail of our research sample, time periods covered, and measurement approaches for all variables are covered in the next section.

4.1. Sample Size and Study Period

The population for this study was drawn from all 412 PSX-listed firms as of June 2019. A selection of the top 100 corporations in Pakistan’s capital markets based on market capitalization was selected from among them. This study followed the previous CSR studies, such as Rao, et al. [57], Akhtaruddin and Rouf [89], Ghazali [90], Muttakin, et al. [91], and also looked at listed companies since they are more likely to engage in CSR disclosure as a consequence of stakeholder expectations. Listed companies are more likely to follow CG guidelines that urge enterprises to publish CSR disclosures and propose that boards be diverse and independent. Due to the inability of several firms to provide essential time-period data, the final sample of this study was reduced to 94 PSX companies (see Table 1).
Because of several specific considerations of the context of this study, such as the time required for listed companies in Pakistan to comply with the CSR guidelines of 2013, CG developments since 2016, and pre-COVID-19 reliable data concentration of all samples, the study period comprises 2017 and 2018. However, for just one characteristic of the CSR disclosure index, ‘comparability’, (see Table 2), data from 2016 are also included. Intensive laborious efforts were required to compile the self-developed database for all the CSR and CG variables in this study. According to Beattie and Thomson [92], analysing the disclosure contents takes substantial labour activity, which limits the sample size.

### Table 1. Distribution of PSX 100 sample.

<table>
<thead>
<tr>
<th>Industry Group</th>
<th>Initial Sample</th>
<th>Final Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumer Discretionary</td>
<td>9</td>
<td>8</td>
</tr>
<tr>
<td>Consumer Staples</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Energy</td>
<td>8</td>
<td>7</td>
</tr>
<tr>
<td>Financials</td>
<td>31</td>
<td>30</td>
</tr>
<tr>
<td>Healthcare</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Industrials</td>
<td>7</td>
<td>6</td>
</tr>
<tr>
<td>Telecommunications and IT Services</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Materials</td>
<td>22</td>
<td>21</td>
</tr>
<tr>
<td>Real Estate</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>Utilities</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>94</strong></td>
</tr>
</tbody>
</table>

**Table 2. CSR Disclosure QUALITY Index and calculation mechanism.**

<table>
<thead>
<tr>
<th>Main Categories on the Disclosure Index</th>
<th>Sub-Categories</th>
<th>Max Possible Score on Each Main Category (Disclosure Levels = 4) × (Number of Sub-Categories)</th>
<th>Scoring Formulae of Sub-Category and Main Category of Disclosure Quality Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Relevance</td>
<td>(1) CSR strategy disclosure(s)</td>
<td>6 × 4 = 24</td>
<td>Relevance index (RI) score = Actual Disclosure score obtained/24</td>
</tr>
<tr>
<td></td>
<td>(2) Description of CSR risk</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Evidence of stakeholder engagement</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4) Discussion of economic performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5) Discussion of social performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6) Discussion of environmental performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Faithful Representation</td>
<td>(1) CSR assurance</td>
<td>3 × 4 = 12</td>
<td>Faithful Representation index (FI) score = Actual Disclosure score obtained/12</td>
</tr>
<tr>
<td></td>
<td>(2) Disclosure of favorable information</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Disclosure of unfavorable information</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Understandability</td>
<td>(1) Clarity of written information</td>
<td>2 × 4 = 8</td>
<td>Understandability index (UI) score = Actual Disclosure score obtained/8</td>
</tr>
<tr>
<td></td>
<td>(2) Clarity of visual information: graphs and Tables</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4.2. Variables and Measurements

This study examines the association between various board characteristics and CSR disclosure quality. Therefore, CSR disclosure quality is considered to be a dependent variable, and board characteristics are considered independent variables.

4.2.1. Dependent Variable–CSR Disclosure Quality

To calculate the CSR disclosure quality, we followed earlier research [93] and used a ‘self-developed CSR disclosure index’ computed from various secondary sources data. This index is based on the qualitative information characteristics of International Conceptual Frameworks (ICF), which is a highly recognized and acceptable standard across the world. In the selected ‘CSR disclosure index’, the five dimensions of CSR disclosure information (i.e., Relevance, Faithful Representation, Understandability, Comparability, and Timeliness) are covered through fifteen sub-categories, and each of these dimensions requires a different calculation mechanism to determine the CSR disclosure quality, which is referred to as ‘Total CSR disclosure quality’ (TCSRDQI) in this study and is presented in detail in Table 2.

We used the content analysis technique to calculate ‘CSR disclosure quality’. We believe that the importance and desire of company management to guarantee disclosure quality will be reflected in the published CSR information [94, 95]. Earlier CSR disclosure studies frequently used content analysis [96–98]. In terms of disclosure procedures, content analysis is a very unobtrusive, simple research approach that collects data from real reports to stakeholders [99, 100].

For content analysis at the first stage, three years of CSR disclosures (2016–2018) for PSX 100 companies were inspected and downloaded in PDF format. Annual reports of sample firms were used for this since relatively few independent CSR, sustainability, or other related reports were available throughout the research period. Within NVivo 12, a data collecting and coding procedure was created, and decision criteria were implemented to improve reliability. These decision criteria guided the coder in determining the precise score to be assigned to each disclosure item if the circumstances were met. The Flesch reading Ease index band was also calculated to find the score for the understandability criterion. Each report was evaluated using the online readability evaluation tool. Each coding choice criterion was reviewed before and after the pilot study, and any differences were corrected.

A pilot study was conducted to assess the validity and reliability of the coding and make any necessary improvements. Based on their market capitalization, twenty firms were chosen at random from each of the six major industries. Both authors coded all of the reports and afterward examined the coding procedure and CSR disclosure quality scores. Any variations between them were assessed, and coding standards were changed as needed to enhance reliability. Only minor variations were discovered, and changes were made to improve clarity and guarantee that no items were missing or misconstrued. This study uses Krippendorff’s alpha, the error percentage, to assess the inter-coder reliability of the
two studies. The Krippendorff’s alpha coefficient for each index disclosure feature varied from 0.90 to 0.96. According to Rao and Carol [20], the fact that all values of Krippendorff’s alpha stayed above 0.90 indicates a high level of coding agreement. To summarize, several precautions were taken to ensure the validity of the findings in this study. For example, experienced researchers assessed the disclosure index and its criteria; afterward, a pilot study was conducted to confirm the reliability of the data-gathering procedure needed by the index.

4.2.2. Independent and Control Variables

The present study, from the CG perspective, has selected five independent variables utilizing a combination of widely studied board characteristics: gender diversity, board independence, female chairperson, female CEO, and board size. It was also necessary to gather data for all firm-level control variables in this investigation; therefore, corporate annual reports and individual firms’ websites were also used. In certain circumstances, internet databases like Bloomberg, Data Analysis Premium by Morningstar, and Reuters were used since the information required was missing or unavailable in annual reports. Manual data collection needed considerable effort, including assessing, reading, and recording. For example, in this study’s board diversity variable, the gender of directors was determined from their names and reading the director biographies. Once the gender was determined, the figures were validated with director photographs. In situations where director photographs were unavailable or any confusion existed, revealed pronouns (that is, his/her) were used to establish a conclusion. The overall numbers of female and male directors were compared to board size statistics. Data for the remaining independent and control variables required were acquired in a similar manner. Table 3 provides the details of symbols and measurements adopted for the operationalization of independent and control variables in the present study.

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Symbol</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Diversity</td>
<td>Gendrdiv</td>
<td>Proportion of female board of director members to total directors on the board</td>
</tr>
<tr>
<td>Board Independence</td>
<td>Independ</td>
<td>Proportion of independent and non-executive directors to total directors on the board</td>
</tr>
<tr>
<td>Female Chairperson</td>
<td>Femchair</td>
<td>1 if the chairperson of the board is female, 0 otherwise</td>
</tr>
<tr>
<td>Female CEO</td>
<td>FemCEO</td>
<td>1 if the CEO is female, 0 otherwise</td>
</tr>
<tr>
<td>Board Size</td>
<td>Bsize</td>
<td>Total number of board members</td>
</tr>
</tbody>
</table>

Control Variables

Profitability:
Return on Assets (ROA) | Prof | ROA = Earnings after tax/Total assets |
Company Leverage: Financial Leverage | FrmLiq | Total debt/Total assets |
Company Liquidity: Current Ratio | FrmLiq | Current assets/Current liabilities |
Company Size | Comsize | Natural log of total assets at the end of the year |
Industry Classification | IND | Dummy variables for the ten industry groups of Global Industry Classification scheme |

5. Empirical Results and Discussions

5.1. Descriptive Statistics

The descriptive statistics of all the dependent, independent, and control variables of the study were calculated, and results are presented in Table 4.
Table 4. Descriptive statistics of independent and control variables.

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Median</th>
<th>Standard Deviation</th>
<th>Min.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR Disclosure Quality</td>
<td>1.76</td>
<td>1.68</td>
<td>0.44</td>
<td>0.63</td>
<td>3.06</td>
</tr>
<tr>
<td>Gender Diversity</td>
<td>0.1</td>
<td>0</td>
<td>0.13</td>
<td>0</td>
<td>0.43</td>
</tr>
<tr>
<td>Board Independence</td>
<td>0.32</td>
<td>0.3</td>
<td>0.12</td>
<td>0</td>
<td>0.5</td>
</tr>
<tr>
<td>Female Chairperson</td>
<td>0.04</td>
<td>0</td>
<td>0.2</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Female CEO</td>
<td>0.02</td>
<td>0</td>
<td>0.11</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Board Size</td>
<td>8.51</td>
<td>8</td>
<td>1.99</td>
<td>6.5</td>
<td>15.5</td>
</tr>
<tr>
<td>Profit</td>
<td>2.58</td>
<td>1.26</td>
<td>9.5</td>
<td>-49.42</td>
<td>26.85</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.24</td>
<td>0.18</td>
<td>0.28</td>
<td>0</td>
<td>1.78</td>
</tr>
<tr>
<td>Liquidity</td>
<td>1.38</td>
<td>1.07</td>
<td>1.48</td>
<td>0.09</td>
<td>10.24</td>
</tr>
<tr>
<td>Company Size</td>
<td>7.7</td>
<td>7.55</td>
<td>0.91</td>
<td>2.81</td>
<td>9.43</td>
</tr>
</tbody>
</table>

The dependent variable ‘CSR Disclosure Quality’ for the PSX sample was 1.76 out of 5 with a standard deviation of 0.44, and there was less variance between PSX companies, although quality disclosure was on average at a lower level. This indicates a very low quality of CSR disclosure information in our sample.

Regarding board characteristics, on average, 10% of directors on the boards of the PSX sample were female, and 32% of independent and non-executive directors. On average, 4% of board chairpersons and 2% of CEOs were female, whereas, on average, PSX 100 companies have eight members on their boards.

The control variables adopted in this study were profit, leverage, liquidity, and company size. Overall, PSX companies are not very profitable, with a result ratio of only 2.58% return of PSX companies. It was also noticed that 24% of total assets were financed by the debt finance method in the PSX 100 companies. The companies in the sample had more current assets than current liabilities, and the liquidity ratio was 1.4; most of these were sizable companies in terms of their total assets.

5.2. Univariate Analysis

Univariate analysis was undertaken to assess the impact of each board characteristic (independent variables) on CSR disclosure quality. The objective was to identify which characteristics, if any, of the board (independent variables) and company (control variables) impacted CSR disclosure quality. To achieve this, a distinction was made between high CSR disclosure quality and low CSR disclosure quality companies. The distinction between high and low CSR disclosure quality was made by referencing the mean CSR disclosure quality. Companies falling above the mean were included as high CSR disclosure quality companies and those below as low CSR disclosure quality. The differences between these two groups were identified through two sample \( t \)-test statistics (used for the continuous variables) and Chi-square tests (used for the dichotomous variables).

The results of the univariate analysis of continuous and dichotomous variables are presented in Table 5 (parts a and b, respectively).

It is necessary to analyse the company-level variable (control variables), as the board characteristics (independent variables) under investigation do not impact disclosure quality in isolation. The univariate analysis identified the characteristics of all the variables in the study. The results show that 51 of 94 PSX sample companies had a low CSR disclosure quality (a mean score less than 1.76, see Table 4) compared to 43 high CSR disclosure quality companies. Interestingly, in reference to the independent variables in the PSX sample, there were no significant differences between high CSR disclosure quality and low CSR disclosure quality companies. However, the results shown for the control variables indicate that several variables may potentially impact the association between board characteristics and CSR disclosure quality. This means some company-level (control) variables were found to potentially impact the association between board characteristics and CSR disclosure
quality. For instance, company size and profitability were highly significant (at the 1% level), while liquidity was less significant at the 10% level only.

Table 5. Univariate analysis results of continuous and Dichotomous variables.

(a) Univariate Analysis Results of Continuous Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Low CSR Disclosure Quality (n = 51)</th>
<th>High CSR Disclosure Quality (n = 43)</th>
<th>Two Sample t-Test Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>Gender Diversity Board Independence</td>
<td>0.1</td>
<td>0.13</td>
<td>0.1</td>
</tr>
<tr>
<td>Board Size</td>
<td>8.28</td>
<td>2.07</td>
<td>8.77</td>
</tr>
<tr>
<td>Profit</td>
<td>0.29</td>
<td>11.59</td>
<td>5.29</td>
</tr>
<tr>
<td>Leverage</td>
<td>0.28</td>
<td>0.34</td>
<td>0.21</td>
</tr>
<tr>
<td>Liquidity</td>
<td>1.58</td>
<td>1.72</td>
<td>1.15</td>
</tr>
<tr>
<td>Company Size</td>
<td>7.47</td>
<td>0.72</td>
<td>7.96</td>
</tr>
</tbody>
</table>

(b) Univariate Analysis Results of Dichotomous Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Without</th>
<th>With</th>
<th>Without</th>
<th>With</th>
<th>Mean Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female Chairperson</td>
<td>47</td>
<td>4</td>
<td>43</td>
<td>0</td>
<td>2.859</td>
</tr>
<tr>
<td>Female CEO</td>
<td>49</td>
<td>2</td>
<td>43</td>
<td>0</td>
<td>1.723</td>
</tr>
</tbody>
</table>

The p-values given in parentheses. *** and * indicate that the variable is significant at 0.01 and 0.10, respectively.

In sum, the results of the univariate analysis indicate differences in the impact of variables between firms with high/low CSR disclosure quality. To develop a more reliable conclusion, the impact of board characteristics on CSR disclosure quality was examined in a multivariate setting and this is discussed next.

5.3. Correlation Analysis

We conducted a correlation analysis, and the results are presented in Table 6. In our study, the correlation between CSR disclosure quality and all independent variables was insignificant. However, the correlation between independent variables such as gender diversity and female chairperson was 0.415 and significant at the 1% level. Similarly, the correlation between board size and board independence was also above −0.30 and significant at the 1% level. The high correlation value meets the threshold limit of less than 0.8, as recommended by Gujarati [101]. Variance inflation factor (VIF) and tolerance scores were calculated (discussed next, in the regression analysis section), and these scores indicate the absence of multicollinearity between the independent variables.

5.4. Multiple Regression Analysis

For the multivariate analysis, we used the conventional ordinary least square (OLS) method using STATA (version 18) in order to produce the best feasible estimations, which corresponds to previous board characteristics and CSR disclosure research [102,103]. A variety of OLS assumptions (normality, multicollinearity, autocorrelation, and homoscedasticity) were considered to determine whether they were valid for our study.

Using Pearson’s correlation and computing the VIF and tolerance ratings of all independent variables, it was found that there were unlikely to be any concerns influencing the
results. Table 7 demonstrates that, as Thompson, et al. [104] predicted, all VIF values were less than 10, and all tolerance scores were less than 0.

Table 6. Pearson correlation coefficient results.

<table>
<thead>
<tr>
<th></th>
<th>CSR Disclosure</th>
<th>Gender Diversity</th>
<th>Board Independence</th>
<th>Female Chairperson</th>
<th>Female CEO</th>
<th>Board Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSR Disclosure</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>0.031</td>
<td>(0.775)</td>
<td>−0.190</td>
<td>−0.175</td>
<td>−0.142</td>
<td>−0.129</td>
</tr>
<tr>
<td>Diversity</td>
<td>(0.066)</td>
<td>(0.547)</td>
<td>1</td>
<td>0.415 **</td>
<td>0.143</td>
<td>0.065</td>
</tr>
<tr>
<td>Board</td>
<td>(0.091)</td>
<td>(0.000)</td>
<td>(0.595)</td>
<td>−0.055</td>
<td>(0.536)</td>
<td>(0.778)</td>
</tr>
<tr>
<td>Chairperson</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female CEO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Board</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Size</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**, shows significant at 0.01.

Table 7. Collinearity statistics of sample.

<table>
<thead>
<tr>
<th></th>
<th>Tolerance</th>
<th>VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender Diversity</td>
<td>0.739</td>
<td>1.353</td>
</tr>
<tr>
<td>Board Independence</td>
<td>0.803</td>
<td>1.245</td>
</tr>
<tr>
<td>Female Chairperson</td>
<td>0.866</td>
<td>1.155</td>
</tr>
<tr>
<td>Female CEO</td>
<td>0.951</td>
<td>1.052</td>
</tr>
<tr>
<td>Board Size</td>
<td>0.803</td>
<td>1.246</td>
</tr>
</tbody>
</table>

Some OLS linear regression assumptions, such as no multicollinearity, were also fully met. Other assumptions, on the other hand, were not met when the data was not normally distributed. As a result, this work builds on prior research [105,106] which addressed comparable difficulties by undertaking regression analysis with robust standard errors using STATA. This approach will produce reliable findings that will overcome data normality concerns.

The results of the multiple regression analysis were calculated using the following regression equation through STATA and are presented in Table 8.

$$ TCSRQI = \beta_0 + \beta_1 \text{Gendrivit} + \beta_2 \text{Indepevit} + \beta_3 \text{Femchairit} + \beta_4 \text{FemCEOit} + \beta_5 \text{Bsizeit} + \beta_6 \text{Profit} + \beta_7 \text{FrmLevit} + \beta_8 \text{FrmLiqt} + \beta_9 \text{Comsizet} + \Sigma 0.00000000000000001 \beta_{100} \text{INDit} + \epsilon $$

where i represents the company, and t = time as the sample year (that is, 2017–2018), the intercept is \( \beta_0 \), \( \beta_1 \ldots \beta_9 \) are coefficients, and \( \epsilon \) is the error term. TCSRQI = CSR disclosure quality is the dependent variable.

In Table 8, the results of the OLS regression are presented in Panel 1, whereas the results of 2SLS as required to check for endogeneity issues (see Section 5.5) are provided in Panel 2.

In Panel 1 of Table 8, the OLS regression findings of the adjusted \( R^2 \) value of 0.47 suggest our model can explain the influence of the specified variables at acceptable levels. According to Chin [107], values of \( R^2 \) up to 67% may describe large variation, but values of 33% and 19% can only explain moderate and weak variation levels, respectively. Prior board diversity and CSR disclosure studies in Pakistan [53,67] have produced \( R \) square values in the 0.15–0.43 range. As a result, in the context of a developing nation like Pakistan, there appear to be more characteristics that future studies should discover and investigate.
We can see that gender diversity, while positively related to CSR disclosure quality, did not reveal a meaningful association, but a female chairperson was considerably significant at the 1% level. Profit and firm size were positive and significant control factors in terms of CSR disclosure quality for PSX 100 companies. For PSX corporations, the association between leverage and liquidity and CSR disclosure quality was insignificant. This means that the gender diversity hypothesis (H1) did not receive any support from the regression results showing an insignificant association with CSR disclosure quality; therefore, it is rejected. Female directors were predicted to be more sensitive to societal concerns and to make the board more aware of social expectations [108], leading to an increase in the level of transparency in disclosures, and thereby enhancing the quality of CSR disclosure. However, considering the dearth of female diversity on PSX firm boards (i.e., mean of 0.09), these findings were predictable for countries like Pakistan. The existing degree of board gender diversity in PSX 100 companies is not a reliable predictor of the quality of CSR disclosure. This means that, in case of Pakistan top 100 companies, the qualitative attributes of disclosure, such as its relevance, verifiability, neutrality, comparability, and clarity of the disclosed material, seem not to have much correlation with the presence of female directors on boards. The findings of this study are
Board independence, like gender diversity, had an insignificant relationship with CSR disclosure quality; hence, H2 is not supported. These findings were unexpected because an increased number of independent directors was expected to strengthen senior management oversight. The modest number of independent non-executive directors on PSX boards (mean of 0.32) may explain the insignificant association between board independence and CSR disclosure quality. The context of Pakistan, particularly as a developing country, is likely to have affected our findings, which are contrary to earlier studies focused on association of board independence and CSR or sustainability disclosures. In our case, we can establish that corporate boards in Pakistan are more concerned about shareholders than stakeholders, thus there is a clear lack of motivation found to disclose voluntary CSR and sustainability information to their stakeholders. As a result, it is expected that PSX boards are more inclined to back financial considerations. According to Handajani, et al. [110], independent directors are a prerequisite of participation in capital markets and the stock exchange, resulting in boards that are focused on the interests of shareholders rather than a broader spectrum of stakeholders. Previous studies [44,111–115] have discovered an insignificant and negative relationship between board independence and CSR disclosures. 

The regression findings revealed a significant negative relationship between female leadership, as chairman or CEO, and the quality of CSR disclosure. Nonetheless, the regression findings show a substantial and negative relationship between female leaders and CSR disclosure quality, providing partial support for two hypotheses (i.e., H3 and H4). This study anticipated a positive relationship between a chairperson or CEO being female and CSR disclosure quality because female leaders are more likely to prefer CSR disclosure and be more active in accepting responsibility and developing relevant disclosure to stakeholders [80,81,86]. When a female becomes chairperson, ‘female’ behaviours change: female directors and female chairpersons adopt a masculine stereotype toward voluntary disclosures [116]. Several previous investigations have discovered this role shift [117,118]. However, given the lack of female representation on boards and in CEO/chairperson leadership roles in companies, it is difficult to draw clear conclusions. As also noticed in the above cases of the two other hypotheses, the case of Pakistan as a developing country has an impact on the findings of our study. For example, we found that PSX company boards had just 4% female chairpersons and 2% female CEOs, which is not very surprising in a country with a largely male-dominated society. This is more likely to have a significant bearing on female(s) in Pakistan to perform the role of a symbolic powerful leader within the board, and act as a tough administrator to their management and consequently also as a barrier to upholding principles of efficient governance, such as using voluntary CSR and sustainability disclosures to increase transparency and accountability to stakeholders. The findings of a negative correlation between female chairpersons and CEOs and CSR disclosure quality contradict the findings of Furlotti, et al. [85], who discovered a positive association.

The regression findings for board size also revealed a statistically insignificant relationship, thus not supporting H5. Similar to all above hypotheses of our study, the context of Pakistan also had an impact on the findings relating to board size. For instance, as with the reported lack of balance on boards in terms of gender already found in our sample, there are more likely to be like-minded directors who dominate overall board decision-making, thus contributing to a lack of efforts to increase the quality of CSR and sustainability disclosures. According to Rao, et al. [57], an increase in the number of board members is more likely to affect the efficacy of board decision-making. For example, with big boards, it may be difficult to establish consensus among varied viewpoints, which has a substantial influence on a board’s monitoring and advising abilities [119]. The findings are congruent with those of Amran, et al. [44], Katmon, et al. [7], and Yekini, et al. [120], who found that board size had no effect on CSR disclosure. Esa and Anum Mohd Ghazali [121], Rao, et al. [57], Said, et al. [88], and Yasser, et al. [22], on the other hand, found a strong relationship between
board size and CSR disclosure quality. As with the previous findings, the results appear to be mixed.

Among all financial measures used by PSX companies as a control variable, only profitability was positively and significantly related to CSR disclosure at the 5% level of significance. Several earlier studies (for example, Cheung, et al. [122], Jizi, et al. [123]) revealed that profit had a positive and significant effect on the quality of CSR disclosure.

In the other financial indicators, financial leverage and liquidity have no statistically significant relationship with CSR disclosure quality. In the Pakistani context, Javaid, et al. [124] and Ismail, et al. [67], discovered that firm leverage had an insignificant relationship with the quality of CSR disclosure. Management of PSX 100 companies is likely to have stronger contacts with their creditors and shareholders and to be more concerned with mandated disclosures than with CSR disclosure quality [30].

The findings on the liquidity ratio for PSX 100 companies demonstrate little correlation with the quality of CSR disclosure. A number of studies [125–127] indicated that liquidity had no effect on CSR disclosure quality. These findings contradict those of Al-Moataz and Hussainey [128], Mathuva [129], and Nandi and Ghosh [130], all of which indicated a substantial correlation.

At the 5% level, the size of PSX companies demonstrated a significant positive connection with CSR disclosure quality. This suggests that company size is connected to the quality of CSR disclosure in Pakistan. Companies with high CSR disclosure quality and poor CSR disclosure quality were related to a significant difference in PSX companies in the univariate analysis. Larger PSX firms are more likely to produce higher-quality CSR disclosure owing to increased visibility than smaller PSX companies. Many previous studies [7,17,41,125,131–133] discovered a substantial positive relationship between firm size and CSR disclosure quality.

The industries in which PSX companies operate were expected to have an influence on the quality of CSR disclosure. Prior research has found mixed evidence for industry as a control variable [113,134]. The Healthcare industry in our PSX sample was chosen as the baseline for comparison with other industries, and this also belongs to the highest CSR disclosure quality of any industrial category. Its disclosure quality score was comparable to the Energy and Materials industry groupings. Consumer Staples, Energy, Industrials, and Materials regression findings revealed minimal variations in CSR disclosure quality. Consumer Staples companies are well-known to the public because they engage in activities with a strong social effect. As a result, they are more likely to have greater CSR disclosure quality, as Gamerschlag, et al. [135] discovered. Similarly, it has been stated that the Energy, Industrials, and Materials industries will have a larger motivation for quality CSR disclosure because they represent particularly ecologically sensitive businesses. However, for other industrial groupings, the correlation with the quality of CSR disclosure reveals some substantial differences. Telecommunication Services and Financials, for example, have significantly worse CSR disclosure quality than Healthcare (at the 1% level). The Telecommunications, IT, and Financials industrial groupings had the lowest levels of disclosure as compared to the Healthcare industry. Similarly, the disclosure quality of the Real Estate and Utilities industry groups was significant at the 5% level, while Consumer Discretionary was significant at the 10% level, according to the regression findings. As a result, industry group appears to have an influence on the quality of CSR disclosure.

5.5. Robustness Check

A number of previous studies [136,137] have shown that board gender diversity is more likely to create problems of endogeneity. Therefore, to effectively mitigate this prospective concern, the Durbin–Wu–Hausman test through the implementation of a two-stage least squares instrumental variable (2SLS-IV) estimator was employed. For this we required instrumental variable(s). However, identifying variables that possess the necessary qualities to function as reliable instruments provides a considerable challenge [138]; based on previous research, we selected non-executive chairperson, CSR committee, and firm age
as instrumental variables (IVs) for this study. At first, the Hansen–Sargan test, commonly known as the Sargan test, was employed to evaluate the overidentification and validity of the instrumental variables (IVs) used in our study. The results of the Sargan test indicated that none of the p-values were below the chosen significance level of 0.05. This provided strong evidence supporting the acceptance of the model. Furthermore, upon conducting an endogeneity test, the smaller p-values obtained from the endogeneity test indicated that the independent variables employed in the regression model were exogenous and exhibited no correlation with the error term. Consequently, with the addition of instrumental variables, the model was re-estimated utilising the statistical software Stata 18; 2SLS-IV results are presented in Panel 2 of Table 8 and are largely consistent with our earlier findings of OLS.

Based on the consistency of the findings of OLS and 2SLS, Figure 2 provides the summary results of the five hypotheses developed in this study.

Figure 2. Summary results of hypotheses.

6. Conclusions

In this study of the association of five board characteristics—namely board gender diversity, independence, female leadership, and board size—with CSR disclosure quality in the context of Pakistan, we have provided some noteworthy conclusions. After using the univariate and multivariate analysis techniques, we found neither gender diversity nor board independence had any significant role in promoting the CSR disclosure quality of listed companies in Pakistan. Companies with ‘high CSR disclosure quality’ were not different in gender diversity from companies with ‘low CSR disclosure quality’. A real dearth of female directors on corporate boards (only 10 percent) and independent directors (only 32 percent) seems to have had consequences for the promotion of the CSR disclosure quality. Similarly, concerning the role of a female chairperson or CEO, there was no indication that this might increase the CSR disclosure quality. More surprisingly, companies with ‘high CSR disclosure quality’ did not have female CEOs or chairpersons. A female chairperson and CEO in Pakistan were likely to change concerns in terms of broader stakeholder groups. Lastly, board ‘size’ was consistent with previous board characteristics, and there was no sign of increased CSR disclosure quality. The possible problems associated with decision-making in the context of larger boards may reduce attention to CSR disclosure quality; this is why we found greater CSR disclosure quality to be associated with fewer members on the board.

Overall, this means, in Pakistan’s context, that corporate boards have been shown to underestimate wider stakeholder demands and concerns for providing more accountability through CSR disclosure quality. This is not much of a surprise, as earlier research [96,139] found companies in low-income countries experienced less public pressure for CSR disclosure than their counterparts in advanced economies. Companies in underdeveloped
nations are typically under more pressure to adhere to commercial and economic objectives than social and environmental ones.

7. Implications, Limitations, and Recommendations for Future Research

Our study provides important theoretical and practical implications. Firstly, in the case of theoretical implications, our findings have demonstrated a lack of empirical support—especially in the case of board gender diversity, independence, and board size—with CSR disclosure quality, and scholars may therefore be compelled to reassess or enhance current theoretical frameworks. Secondly, we noticed a lack of significant relationships in the Pakistani context, indicating unique factors specific to the country’s business environment, cultural norms, and regulatory landscape. Therefore, gaining a comprehensive understanding of the distinct cultural, institutional, and regulatory elements inherent in the Pakistani business environment has the potential to enhance and refine existing theoretical frameworks.

Similarly, there are a number of practical implications of our findings. For example, they suggest areas in which it may be necessary for policymakers and regulators to reassess the significance attributed to specific board qualities outlined in CG principles. Considering the country context, it is always necessary to customise legislation to suit the unique requirements and dynamics. For instance, listed companies and regulators in Pakistan need to emphasize increasing the present levels of diversity and independent non-executive directors on corporate boards. Similarly, regulators such as SECP need to emphasize policies linked to promoting the quality of CSR disclosure instead of the quantity of CSR discourse. Another practical implication of our research is that it may be valuable for corporate boards who are interested in the reassessment of the significance attributed to specific characteristics when making decisions pertaining to CSR disclosures. In the event that a notable effect is absent, boards may opt to divert their attention onto alternative elements that hold more influence within the Pakistani environment, such as industry-specific issues or the other related expectations of stakeholders. Finally, one of the practical implications is for research, where the findings of this study may potentially stimulate scholarly discourse regarding the enduring effects of board characteristics on CSR. Although the immediate correlation may not have much significance, this study could potentially stimulate further investigation into the potential delayed consequences of these attributes or the potential manifestation of their impacts by alternative means over an extended period.

The present study is not without limitations; because of the limited resource availability, especially considering the need for self-developed approaches for CG and CSR data collection, we had to restrict our study period, which was only two years. The magnitude and spontaneity of resulting new policies, some cultural shifts and developments to respond some trends, such COVID-19, might have potential impacts on the generalizability of our findings. For instance, since COVID-19, there have been recent policy and cultural developments in Pakistani companies, in particular in the CSR domain; as we have not addressed these developments, our findings are only specific to the time period studied. One further constraint of our study is the strategic nature of the subjects under investigation, namely corporate governance (CG) and corporate social responsibility (CSR). Consequently, conducting a study of short length may have resulted in the oversight of long-term trends and patterns, potentially leading to little understanding of the wider context, hence potentially impacting on the generalizability of our findings.

All these limitations offer future research opportunities to develop studies on longitudinal aspects. Also, a comparative analysis of two time periods, such as pre-COVID-19 and post-COVID-19, may offer more valuable outcomes in the context of the studied relationship. Moreover, the impact of other board characteristics such as age, educational level, ethnic background, and multiple directorships on CSR disclosures should be contemplated, acknowledging that the present study only considered the most common board characteristics. Furthermore, future research could be developed on the lines of the application of system theories perspectives, including legitimacy theory, stakeholder theory, and institu-
tional theory, to offer a different insight into the association of board characteristics and CSR disclosure quality.

**Author Contributions:** Conceptualization, F.H.; data curation, F.H. and K.H.; formal analysis, F.H.; methodology, F.H. and K.H.; validation, F.H. and K.H.; writing—original draft preparation, F.H., M.A. and K.H.; writing—review and editing, F.H., M.A. and K.H.; supervision, F.H. All authors have read and agreed to the published version of the manuscript.

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**Data Availability Statement:** The reports analysed are available on the companies’ websites. The data can be made available by the authors upon request.

**Conflicts of Interest:** Author Faisal Hameed is employed by UP Education Australia Pty Ltd. Other authors declare no conflict of interest.

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