



Article Stakeholder-Centered Corporate Governance and Corporate Sustainable Development: Evidence from CSR Practices in the Top Companies by Market Capitalization at Shanghai Stock Exchange of China

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Abstract: This study aims to investigate the nature and intensity of changes in corporate sustainable development as a result of certain relationships between stakeholder-centered corporate governance (CG) and corporate social responsibility CSR practices in the leading firms with respect to their market capitalization (MC) in the Shanghai stock exchange (SSE) of China. This study selected the top 100 companies from the manufacturing sector at the Shanghai Stock Exchange by (MC) for a period of 10 years (2012-2021). For this quantitative study, financial and CSR performance data were collected from the China Securities Market and Accounting Database (CSMAR), a reliable database for examining research on Chinese listed companies. For the data analysis, we applied different statistical tools that include descriptive statistics; a correlation matrix, fixed effect regression analysis, and moderation analysis of the effect of government subsidies on the relationship between explanatory variables and the dependent variable (firm performance) were applied. The result of the adjusted R-square values suggests that there has been a considerable change in the value of explained variable Firm Performance (FP), represented by ROA, TbQ, and Grow caused by the explanatory variables of the study, including Government-centered responsibility (GCR), communitycentered responsibility (COMCR), firm age (FA), firm size (FS), and leverage (LV). Supplier-centered responsibility (SCR), customer-centered responsibility (CCR), creditor-centered responsibility (CRCR), and total risk (TR) were, respectively, at a 1% and 5% level of significance. The values extracted from the moderation effect show that Sub is a key factor in motivating the well-established large firms to focus on stakeholders-centered CSR practices, which ultimately improves the FP in the short and long run.

Keywords: ownership structure; sustainable firm performance; ownership concentration; institutional ownership; managerial ownership; family ownership; strategic managerial policy

1. Introduction

The origin of the term "corporate governance" is traced back to 1932 when it was initially introduced. Since then, with the passage of time, a conceptually-mature system has been defined and established by academics, covering the main two aspects of shareholders and stakeholders as its domain or scope of interest. The first perspective of corporate governance (CG) from the perspective of shareholders is based on the popular agency theory. This is because there are many misunderstandings and conflicting interests between



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Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https:// creativecommons.org/licenses/by/ 4.0/). shareholders and management due to the division of roles within an organization. CG is essential in addressing and mitigating these conflicts of interest in order to create a strong relationship between shareholders (the principal) and management (the agent) [1]. The stakeholder governance perspective is also significant because it considers the interests of a wider range of stakeholders, including employees, customers, government, the general public, creditors, and others, in addition to shareholders. This broader scope of consideration acknowledges that these stakeholders also have a vested interest in the organization and its actions [2]. Governance systems vary from industry to industry and the uniform CG theories cannot be adopted in every industry; therefore, CG practices differ between industries, as has been suggested by a majority of researchers in their studies [3]. The setting and implementation of policies vary from organization to organization, depending on their decision making structure, which means that some organizations are controlled by sole CEO while others are led by a subset of decision makers [4]. For example, key shareholders in terms of ownership claims are considered more powerful than the CEOs [5].

The majority of the relevant studies have explored a key, and the commonly-prevailing attribute of the studied boards was their "independence" [6-8] and, to monitor the strategic behavior, it is vital to be present [9,10]. It was predicted in one study that a trend may occur in which companies will lead by the equity holder-centered control structure with major rules of the shareholder superiority. In this way, firms will pick a highly efficient mode of managing their business, consequently following the shareholder-centered system on the bases of priority and superiority [11,12]. There is still ambiguity regarding the influence of stakeholder-centered activities on the sustainable development of firms [13,14]. There is a rich potential in resolving the doubts regarding stakeholders' broader role that could benefit their firms, although they are still unresolved [15]. The 200 CEOs of the largest US companies participated in the Business Roundtable held in 1997 and declared that shareholder interest is the sole rationale of both the management and BODs of the company to serve [16]. However, the same esteemed association revised its policy statement in 2019, concluding that all the efforts of the management and the BODs shall be centered around the stakeholder groups, including employees, customers, suppliers, and communities [16,17]. It is clear that CSR shall not only focus on the important role of the shareholder, but significant attention shall be given to the stakeholders that may exist in the form of consumers, employees, general public, suppliers, agents, the environment, and the society while making business decisions [18]. It is concluded that compliance with the CSR practices is a key driver for the business decision making process of the corporate sector and, as a result, which will boost the value and importance of social responsibility in the eyes of entrepreneurs [19]. In order to obtain more valuable findings regarding CG, sustainable development, CSR, and the firm performance of Chinese listed firms, one improved data quality and a larger sample size can be found [20]. The corporate sector should prefer the interest of stakeholders, which will benefit the corporation on one hand while, on the other hand, it will boost social welfare [21]. In this regard, several studies were conducted to explore the impact of corporate governance on corporate sustainable development [20–25]. The literature also shows the relationship between stakeholders' influence on corporate sustainable development [26-28]. Besides, Nguyen and Yang (2020) worked on an appropriate ownership structure that can effectively limit a bank's risk-taking behavior in proportion to the level of risk it faces [29]. Nguyen, Q. K. (2022) reported similar findings [30]. However, there is a scarcity of research showing the combined relationship between Stakeholder-Centred Corporate Governance and Corporate sustainable development, particularly in the context of China [31,32]. According to these underpinning theories of this study, which are stakeholder theory, agency theory, and stewardship theory, the major role of CG system is to minimize the possibility of conflict of interest, connecting shareholders' interests with those of the management interests, and, above all, to parallel management objectives with those of stakeholders for maximizing FP [29–32].

In light of the above-discussed relevant and up-to-date literature in the same area of interest, this study has sufficiently identified a research gap that requires more research based on the authentic support of the previous literature.

This study is novel and contributes with respect to many dimensions, especially the gap left by the previous researchers. First, the previous research studies [20,21] have focused on a limited sample size with small and medium size firms, whereas this study considered a large sample size of the top 100 big firms with respect to market capitalization, registered on SSE. Second, previous studies [13–15] suggested further research in order to clarify an ambiguous role of stakeholders for better FP, which is still unresolved. Therefore, the current study attempts to fill this gap with more authentic dimensions. Third, previous studies [16–19] have focused on the role of shareholder-oriented policies while the current study attempts to consider the active role of shareholders in better management and firm performance. Fourth, previous studies [23-25] considered a limited time frame in examining the CSR practices of firm performance, whereas this study has considered a 10-year period for the data of the sample firms. Finally, various studies [31,32] focused on the CSR practices in the Chinese SME's with the use of simple techniques, while this study focuses on the corporate sector of SSE with the use of advanced econometric techniques and tests; as well, it also considers governmental subsidy as a moderator variable to obtain more authentic results.

The study contains six essential sections, including an introduction that describes the study's context, research gap, and purpose, followed by a literature review and hypothesis development that examines crucial empirical evidence from the prior literature. In the Section 3, we present our methodology by describing the research design employed in this study, our target population, and sample size, as well as a brief summary of our variables. In Section 4, we discuss the most important findings of this study, whilst, in the discussion part we summarize the study's findings.

2. Literature and Hypotheses

Underpinning Theory(s) of the Study

Every research study is based on some underpinning theory(s). This study is based on the stakeholder theory, agency theory, and stewardship theory [29–32]. According to these underpinning theories, the major role of the CG system is to minimize the possibility of conflict of interest, connecting shareholders' interests with those of the management interests and, above all, to parallel management objectives with those of stakeholders for maximizing FP. These theories also suggest that management should account for the interest of all the stakeholders, i.e., the employees, customers, suppliers, shareholders, creditors, government, and community. Therefore, the stakeholder theory justifies this study in order to give priority to all of the stakeholders in terms of securing their interests for long-term organizational value creation.

More effective decision-making can also be connected to the size of the board. That is, larger the boards, and more efficient supervision of corporate management, are in the best interest of the stakeholders [31]. Other benefits of larger boards are smooth communication, highly committed members, and mutual coordination, which resultantly broaden the capacity of the organization to assign higher rank to the CSR. Therefore, larger boards can easily accommodate the real CSR outcomes in a true letter and spirit [32–35]. Some academics believe that CSR and CS are the same concept, although they propose maintaining a distinction between the two in their application to business practice. Van Marrewijk (2003) is one of the pioneering scholars who have discussed the relationship between Corporate Social Responsibility (CSR) and Corporate Sustainability (CS). He believes that CSR and CS are closely related, but suggests keeping a slight distinction between them. He suggests that CSR should be associated with the communal aspect of people and includes stakeholder dialogue and sustainability reporting, while CS should be associated with the agency principle, and includes value creation and environmental management, among others [28].

Steurer et al. (2005) identify CSR as management techniques focused on adopting CS in the short-term, while they also see CS and CS as being related concepts. In their discussion of the connections between CS, CSR, and sustainable development, Steurer et al. (2005) characterize the notions as "closely connected, tripartite concepts, albeit on separate levels of definition with various conceptual nuances" [25]. Some academics, however, do not believe that CSR and CS belong in the same discourse. Ebner and Baumgartner (2006), for instance, argue that CSR and CS are not the same idea and advocate for the use of CSR as the social component of CS (or sustainable development), which is primarily based on a sound stakeholder approach [36]. According to Linnenluecke et al. (2009), CSR is the social component of CS in which a company communicates with its stakeholders, actively addresses its community base, and pays attention to the internal development of its workforce [37]. The successful execution of social duties can enable businesses to receive vital strategic development resources, increase customer confidence in the organization, and simultaneously attract greater investor interest. Corporate social responsibility must be fulfilled in several ways, including through charitable contributions, environmental protection, employment creation, and other areas [38]. It has long been a widespread economic development model for polluting businesses, which has seriously harmed the environment [39] and led to an increase in the frequency of extreme weather events such as haze, which has had a negative influence on people's quality of life. Therefore, businesses that simply focus on economic development disregard the concentrated expression of social responsibility fulfillment.

Similarly, corporations are also obliged to keep in view the necessarily cooperative behavior of various humanitarian projects such as supporting educational activities, food supply and safety, promotion of the arts, and other related activities. Such charitable activities will help to uplift the living standards of society as whole and help in the protection of social ecology [40]. The findings of one study suggested that the involvement of the corporate sector in activities surrounded by societal responsibilities have a positive impact on various inner behaviors of employees, for example, motivation level, dedication-oriented attitude, and environment protection behavior that can resultantly encourage creativity or self-direction characteristics in employees, which will drive development of the society as a whole [41,42].

Hypothesis 1 (H1). CSR has a direct impact on improving corporate sustainable development.

The CSR of the corporate sector is tied closely to the CG system. More specifically, it is targeted towards the stakeholders-centered system instead of the shareholder-specific primary CG model. Firstly, a very concise and concrete definition of CSR has been issued by the World Business Council for Sustainable Development (WBCSD), that is, "the continuing commitment by business to behave ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as the local community and society at large" [43]. In this approach, the company is responsible for considering stakeholders in the long-run value creation perspective of the organization, which is beyond the primary purpose of most organizations following the traditional model for achieving their set targets or purposes. CSR is considered to be a pyramid by Carroll, that is comprised of four parts: economic, legal, ethical, and philanthropic responsibilities [44]. There are various kinds of responsibilities that should be shouldered by companies, such as economic and legal responsibilities, which in turn make the companies profitable. For the mitigation of various natures of risks and obtaining worthy circle, better engagement of stakeholders stood out as an important prerequisite for the practicing companies [45]. In light of the above interpretations, it is concluded that there is a closer bond between CSR practices and well-managed stakeholders, which lead to an in-depth consolidated strategic framework based on stakeholder-oriented policy [46].

According to Hu et al. (2021), GS, as a well-designed environmental policy, can boost businesses' green process and product innovation [1] in three ways. First, GS can help with

green innovation implementation by providing financial support. Green innovations can solve the issue of environmental pollution; however, they are frequently expensive. When a company adopts green manufacturing, it is vital to invest in green equipment to advance cleaner production or end-of-pipe technologies [2]. When implementing green production, businesses also require funding to upgrade their production machinery, and hire and train R&D professionals [3]. Second, government funding, and specifically green R&D funding, can influence the direction that businesses invest in green R&D through a variety of innovative programs [3,4]. With assistance from the government, these risks and uncertainties can be reduced, as government-funded green R&D initiatives typically involve preliminary screening [5]. As a result, businesses with more green subsidies are more likely to finance innovative green technologies. Furthermore, research by Dang and Nguyen (2022) indicates a strong correlation between the effectiveness of a company's internal management and the likelihood of experiencing a drastic decrease in stock value [47]. Another study recently conducted by Dang and Nguyen (2022) suggests that having a larger audit committee is associated with an increased likelihood of tax avoidance [48]. However, the presence of female members, financial experts, and accounting experts within the audit committee can act as a deterrent to such behaviour. Further, the relationship between ownership structure and risk-taking behavior may vary among banks with differing levels of risk and in countries with variying degrees of institutional strength (Nguyen, 2022) [49].

As far as the connection between sustainable development and firm performance is concerned, both of the variables have a target that is beyond economic growth. There is a clear and valid distinction between firm performance and financial performance, keeping in view the aspects of firm value, reputation of the firm, and workforce commitments [50,51]. The most globally-acknowledged objectives of sustainable development have been constituted by the United Nations, based on the specified 17 SDGs along with the 169 targets [52]. In this way, more concrete and concise objectives have been demarcated for those companies who desire to pursue sustainable development [53,54]. The potentials of sustainable development, as well as competitiveness of corporations that results in a higher-quality development, has been described in most of the studies of the same interest [55]. There are various parameters through which one can measure higher-quality development and, among them, apart from other parameters, are rate of profit, return on assets (ROA), Tobin Q, earning per share, return on total assets, and asset turnover rates, which can all be used to calculate the efficiency of corporations and their performance [56,57]. The primary purpose behind establishing a firm, and a traditional managerial policy of the majority firms, has been to multiply profits while the balanced-approach organizations will comply stakeholder's preferences in a real-world situation. In addition to this, a firm that aims to achieve a higher level of governance can easily do so by improving and straightening-out the relationship with the internal as well as external stakeholders of the corporate sector [58]. To survive in the fierce competitive markets, CSR can be taken as a tool specifically in this era of social media. In such market situations, the corporations would be vigilant to fulfill the desire of the stakeholders with the help of increasing employee incentives, assigning a key value to safe production measures, and giving due attention to the protection of the environment [59,60]. In this way, mitigating the conflicts with the stakeholders and overcoming the impact of the potential risks on the routine operation of a corporation can be made possible. Not to the fullest extent, but up to some extent, the level of CG directly affects the efficiency level of the operations of the practicing organizations. Undoubtedly, an effective corporate governance strategy can definitely boost the overall performance of corporations [61]. The performance of the corporate sector is positively affected through a favorable social reputation of those corporations who have an inclination towards considering the recognition and group awareness of various kinds of stakeholders [62].

In the context of social exchange theory, trust can not only be built but can be retained between the corporations and stakeholders because of the active participation of corporations in societal responsibilities, it can also improve the sense of responsibility of the corporation's employees [63]. This will further strengthen the relationship between the corporate sector and its employees, which is considered a valuable asset, as it will also help the corporations to constitute and develop their strategic objectives in light of understanding their shortcomings from this strong mutual relationship [64]. Higher-level transparency in routine business rules implementation and operation management is attributed to a higher level of corporate governance practices in the firms. Whenever any kind of problem facing these organizations in their operations can be handled timely, it will result in avoiding potential risk in terms of time and transaction cost, as well as boosting the production and operation efficiency of the concerned firms [65]. Contrary to the traditional operation approaches in the past decades, corporations are now well-aware and paying considerable attention to their social responsibilities to make the environment more clean and green. Therefore, a gradual increase has been seen in this initiative and corporations have been making efforts to considerably reduce environmental hazards by putting more proportionate investment into environmental protection activities [66]. A higher degree of ethical standards in their operations and a considerable sense of social responsibility are key factors to attracting a higher level of demand both individual and institutional investors for their stocks. Whereas, due to the compliance of such factors, corporations obtain a large amount of investments and a considerable amount is set aside for projects that are protecting the environment [67]. Similarly, under the social exchange theory, corporations paying less attention to environmental protection while they are in the development process will face hardships. In this way, improvement and due attention to being responsible to the environment will pull increasing environmental protection investment [68,69]. The environmental protection phenomenon is gaining momentum due to increasing environmental problems; therefore, stakeholder's awareness towards this burning issue is gradually improving [70]. It is evident that investment return is on an increasing pace in cases where corporations consider environmental protection-related factors and invest more funds in it, while other stakeholders, especially the customers, will cooperate because of the firms' orientation regarding the environment [71]. Evidence shows that organizations with more CSR-oriented policies have more profitability in return as compared to those having lesser CSR practices. In order to build the trust and confidence of both the internal and external stakeholders, such as employees, creditors, shareholders, etc., and to overcome the market risk and systematic financial risk, corporations are striving to pay proper attention to clean and green practices both in policies as well as in monetary terms [72]. In the same way, the company reputation and firm value can also be improved by strictly following policy measures such as clean water and sanitation systems, production with responsibility, clean energy usage, justice-based operations on land and below water, building sustainable communities and infrastructure, and mitigating inequalities. Besides the fundamental responsibilities of the corporate sector, the stakeholders or societies want the company to meet the above-mentioned higher standards and expectations. For attaining sustainable development, improvement in firm performance is an indispensable factor [73]. In light of the previous studies [74–77], in this study, a well-known institutional setting of "government subsidy" is adopted as a moderator variable in order to judge the effect of CSR practices on FP through government subsidy in the top companies of SSE.

Keeping in view the above detailed discussion on the key variables of this study, which are corporate governance, sustainable development, and corporate social responsibility in the corporate sector of the Chinese economy, the following hypotheses are constituted for testing by valid analysis tools:

Hypothesis 2 (H2). CSR can boost up corporate sustainable development via government Subsidy.

3. Research Design

3.1. Sample and Data Collection

The study has chosen the top 100 companies by market capitalization from the manufacturing sector on the Shanghai Stock Exchange for a period of 10 years (2012–2021). The reason for choosing this unique blend of manufacturing companies is that, every year, the authorities of the Shanghai stock market issue a list of top companies in terms of higher market capitalization. Therefore, it is also evident from the studies that large manufacturing and financially-strong companies, due to their nature of business, are highly polluting and labor-intensive producers that have a great concern of higher societal responsibility. Similarly, these companies have more funds and they set aside a reasonable proportion of funds for the conducting of CSR practices in order to show themselves to be more responsible producers, which in turn gains higher profits to the shareholders and is also beneficial to other stakeholders such as customers, the general community, creditors, and government and environmental agencies [78–80]. The secondary data, both financial and CSR performance, have been collected for the current quantitative study from the most reliable database, te China Security Markets and Accounting Database (CSMAR), for examining Chinese listed companies related to the current research [81–83]. Furthermore, Table 1 shows the operational definitions of the current study.

Table 1. Operational Definitions of Variables of the S	Study.
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Variable	Abbreviation	Operational Definition	Reference
Firm Performance	FP	It is the combination of Return on assets, Tobin's Q and Growth	Cho et al. (2019) [84]
Return on assets	ROA	Net income divided by total assets	Cho et al. (2019) [84]
Tobin's Q ratio	TbQ	Market value of total assets divided by book value of total assets	Khan et al. (2020) [85]
Growth	Grow	Sales growth	Khan et al. (2020) [85]
Corporate Social responsibility	CSR	The concerns of business towards stakeholders during their business operations. It is combination of ECR, GCR, SCR, COMCR, CRCR.	World Business Council for Sustainable Development: Geneva, Switzerland, 2000 [45]
Employee centered responsibility	ECR	Wages and benefits given to employees	Zhang et al. (2022) [86]
Government centered responsibility	GCR	Compliance to tax payments	Zhang et al. (2022) [86]
Supplier centered responsibility	SCR	Average account payables	Zhang et al. (2022) [86]
Community centered responsibility	COMCR	The ratio of donations to locality and operating income	Zhang et al. (2022) [86]
Creditors centered responsibility	CRCR	Ability to pay interests and debts on time	Zhang et al. (2022) [86]
Leverage	Lev	Debt-to-assets ratio of the firm	Cho et al. (2019) [84]
Firm age	FA	Total age of firm in years since its inception	Moores and Yuen (2001) [87]
Total risk	TR	Combination of systematic and unsystematic risks	Devie et al. (2020) [88]
Firm Size	FS	Natural Log of total assets of firm	Ryu and Yu (2020) [89]
Govt.Subsidy	Sub	Government directly and indirectly support firms to undertake CSR practices	Zhang et al. (2022) [86]

3.2. Variables and Measurement

3.2.1. Dependant Variable

Firm performance (FP) is the explained variable of the study that is a measure of the sustainable development of the sample firms. These measures include return on assets (ROA), Tobin's Q, and sales growth, which are valuable indicators of firm performance, while regression models are used to judge the effect of CSR on the dependent variable of the

study [90]. The first proxy for the profitability of the firm is ROA, which is most-commonly used among researchers in the field of finance. It can be calculated through the net profits of the firm divided by total assets, and indicates the efficiency of the firm in utilizing and managing its total assets to obtain maximum profits. The profitability of the firm is considered the base point for the determination of its sustainable development and it is the face of the firm for both the owner-managers and stakeholders [84,91–93]. Furthermore, sales growth is another proxy to gauge firm performance, and is the growth rate in the sales revenues, which is mentioned at the top of the income statement of a firm. It is an indicator of the expansion in the company sales or market share over a specified period of time [94,95]. This study uses variation in sales revenues and compares the sales of the current year with those of the preceding year. In order to gauge the firm value of the firm, Tobin's Q has been selected as a proxy variable for the measurement of firm value while it is one of the leading measures of market value. Tobin's Q focuses on growth opportunities which will arise in the future using the examinations of market shares, while ROA is always based on the past performance of the firms [96,97]. To calculate Tobin's Q, the proxy used by Aivazain et al. has been adopted; that is, market value of total assets divided by book value of assets [98].

3.2.2. Explanatory Variables

The independent variable of the study is CSR, which has been calculated with the help of the content analysis method, which measures various responsibilities of stakeholders based on the firm expense. In this way, the contribution of each stakeholder is measured due to the available number of observations. The CSR performance based on the stakeholdercentered strategy has been measured through sub-categories of CSR as follows. First, employee-centered CSR performance comprises paying wages, social benefit insurance, buying safety-related equipment, and offering training opportunities to train and develop employees for current and upcoming challenges. Both amounts paid to the employee and for the benefit of the employee, and the calculation of the ratio of the given index, are calculated against the operating revenue, and a higher value of this ratio is a sign of greater employee responsibility. Second, the government-centered CSR performance strategy is based on the ingredients of compliance to regulations and payment of taxes. The two measures of tax payment are operating tax and extra charges ratio, and this study has taken both of the mentioned measures to calculate the ratio of this index based on the operating revenue of the sample firms. Moreover, the second is the income tax ratio (ITR), the measurement of which is based on the amount of actual paid taxes. A higher the value of this ratio means that the government takes greater responsibility. The third is the supplier-cantered CSR performance, which can be found from the turnover ratio of the account payables, while operating cost has been used as a proxy measure of the average account payables. A lower ratio indicates a greater responsibility on the part of supplier. The other performance parameter is the community-centered CSR, which is based on the quantity of contribution by the sample firm to the neighborhood community. Similarly, here, the purpose is to ascertain whether the firm is donating funds to the nearby locality or community, because it is common practice that majority of firms donate to their local surroundings. For this very purpose, the formula for the calculation of this donation ratio is donations divided by operating revenue. The criterion for the outcome of this ratio is that the higher the value of the ratio, the more focus is placed on involvement in the community-centered CSR initiatives by the sample firms of the study. The last and the fifth parameter is the creditor-centered CSR performance, which shows the credit worthiness of the sample firms towards the creditors. In short, it indicates whether the firm has honored their obligations on time or, in other words, the ability of the firm to pay its debts and interest on time. This can be gauged with the help of a very commonly-used proxy, liquidity ratio, that is, dividing current assets by the current liabilities. The higher the value of the liquidity ratio, the more responsible the creditor is.

3.2.3. Control Variables

The study has considered control variables of (FS), (FA), total risk (TR), and leverage ratio (LV), which may influence the CSR performance. In this context, the association between CSR practices and firm performance is significantly influenced by the FA and FS, while it is evident from the past literature that large firms are more inclined towards involvement in the CSR practices supported by their large setup and heavily-available utilizable resources [99,100]. In order to calculate FS, FA, and total risk, which are key factors influencing firm performance, the number of employees, current year less initial year, and standard deviation of the daily stock return are used as proxies in the study under consideration [88]. Debt-to-asset ratio is considered very important in terms of its impact on the CSR and firm performance, and it is commonly used in the research area of this type and will help to obtain valid findings for generalized adaptation in various regions of the world [64].

3.2.4. Moderator Variable

The study included government subsidy, represented as the moderator variable and indexed as subsidy, and it is denoted as "Sub." Similarly, the required data have been collected from the CSMAR database while the Sub and its subsequent interaction with CSR have been shown in the following regression model of the study.

3.2.5. Econometric Model

This study empirically tested the effect of CSR practices on firm performance in the top manufacturing companies listed at the Shanghai Stock Exchange for a period of 10 years. Based on the relevant literature, this research adopted a fixed effect (FE) regression model to test the hypotheses of the study. In the previous CSR-related research, the OL model has been frequently used as the baseline model; therefore, in this study, FE is adopted to obtain more purified findings, and the regression model is given bellow in light of the panel data model for measuring FP through ROA, TbQ, and Grow in the given period t [101–106].

$$\begin{split} FPi,t &= \alpha 0 + \beta 1(ECR)i,t + \beta 2(GCR)t + \beta 3(SCR)i,t + \beta 4(CCR)t + \beta 5(COMCR) + \beta 6(CRCR)i,t_{-} + \\ \beta 7(ECR \times Subsidy)i,t + \beta 8(GCR \times Subsidy)i,t + \beta 9(SCR \times Subsidy)i,t + \beta 10(CCR \times Subsidy)i,t + \\ \beta 11(COMCR \times Subsidy)i,t + \beta 12(CRCR \times Subsidy)i,t + \beta 13Xi,t + \gamma i + \varepsilon i,t \end{split}$$

The above econometric model shows the explained variable firm performance, which is denoted by FP for the sample firms *i* in the given year *t*, and it is measured with the proxies of ROA, Tobin Q, and Grow in the leading firms by (MC) listed in the SSE for a period of 10 years (2011–2021). Similarly, ECR, GCR, SCR, CCR, COMCR, CRCR, and Sub represent employee-centered responsibility, government-centered responsibility, supplier-centered responsibility, customer-centered responsibility, community-centered responsibility, while X represents the control variables that are FS, FA and LV, region, and total risk, γ denotes specific effects of firms, and ε shows the error term or all other effects not covered in the given model.

4. Results

4.1. Descriptive Statistics

The details of the descriptive statistics are given in Table 2, with the application of the variables of interest data of the sample non-financial top firms on the Shanghai Stock Exchange China by applying the given proxies in light of the previous literature while the output values of the items such as minimum, maximum, mean, and standard deviation can been observed. The values are, on average, favorable, showing that the profitability of the sample firms is good, with the mean values of ROA, TbQ, and Grow being 0.039, 4.011, and 0.111, respectively. Therefore, the profitability, in totality, stood at an average level while the minimum value for ROA is 0.599, which is an indication of the profit-earning status of the top companies at the Shanghai stock exchange. The difference between the Min and

Max values of the three proxies is also narrow, which is a sign of significant uniformity in the performance of the sample top firms by market capitalization in China's leading stock exchange. In line with the above-mentioned values of Min and Max, the value for the Sub received from the government is also less varied from company to company.

Table 2. Descriptive statistics.

Variables	Min	Max	Mean	St. Dev
ROA	0.599	0.601	0.039	0.093
TbQ	0.983	0.1144	0.011	5.099
Grow	0.899	11.11	0.111	1.531
ECR	0.055	1.99	0.103	0.010
GCR	0.010	0.299	0.013	0.015
SCR	0.501	21.30	1.025	0.952
COMCR	0.001	0.021	0.003	0.002
CRCR	0.155	80.31	3.88	1.199
Sub	2.03 imes 105	3.01×106	1.02×1071	0.92 imes 107
LV	0.006	1.301	0.260	0.163
FS	41.00	865.00	442.5	177.8
FA	6.010	28.00	15.44	3.02
TR	0.010	0.075	0.028	0.007

In Table 3, below, regarding the correlation matrix of the independent variables of the study, it is clear that there is low level of correlation between the main variables of this study because all the correlation coefficients are less than 0.8, which is the threshold value and acceptable in any research study. Similarly, it is observed in the results that the leading firms by (MC) in the SSE are more inclined towards CSR practices due to their higher financial soundness and higher target achievements as compared to the findings of the previous studies on average, as well as on the SMEs, CSR, and firm performance factors. Furthermore, the issue of multicollinearity, the variance inflation factor (VIF), has been applied for each variable and calculated in Table 4, below, while the result of VIF associated with that of the predictors shows that it is less than 10, the threshold value. In other words, there is no serious issue of multicollinearity in the models of the current study because it falls within the acceptable range as per the threshold value of 10 [107].

Table 5, below, is for two staged least squares (2SLS). The dependent variable ROA is run against the above variables. The insignificance of the independent variables shows that there is no endogeneity issue in the model [108,109].

Table 6, below, shows the robust standard errors. Moreover, the values of the Breusch pagan test and While tests show that the data is homoskedastic.

	Table 3. (Correla	tion	matrix	of	the	variał	oles.
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Indicators	ROA	GCR	ECR	SCR	CCR	COMCR	CRCR	Sub
ROA	1							
GCR	0.509	1						
ECR	0.600 ***	0.580 **	1					
SCR	0.510 ***	0.671 ***	0.399	1				
CCR	0.501 ***	0.761 ***	0.499 ***	0.499 ***	1			
COMCR	0.521 ***	0.781 ***	0.699 ***	0.399 **	0.499	1		
CRCR	0.571 *	0.644 **	0.599 ***	0.201 ***	0.389 **	0.781 *	1	
Sub	0.501 ***	0.677 ***	0.589 ***	0.200 *	0.399 ***	0.621	0.377 **	1

Note: The * show the level of significance. ***, ** and * represent the significance level at 1, 5, and 10 percent, respectively.

Variables	Tolerance	VIF
ROA	0.972	1.028
TbQ	0.976	1.025
Grow	0.995	1.005
ECR	0.635	1.574
GCR	0.995	1.005
SCR	0.586	1.707
COMCR	0.578	1.731
CRCR	0.479	1.95
Sub	0.968	1.033
LV	0.638	1.568
FS	0.778	1.285
FA	0.832	1.202
TR	0.617	1.620

Table 4. Correlation Tolerance and VIF.

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Table 5. 2SLS Method for Endogenity.

Ind.Var	Coefficient	St. Error	t-Static	Sig
GCR	0.339	0.048	11.23	0.064
ECR	0.210	0.170	16.59	0.080
SCR	0.301	0.165	11.01	0.059
CCR	0.390	0.160	13.60	0.065
COMCR	0.410	0.029	12.01	0.075
CRCR	0.299	0.179	9.83	0.069
FA	0.333	0.048	11.59	0.090
FS	0.389	0.051	11.77	0.085
LV	0.455	0.049	12.34	0.077
TR	0.289	0.175	9.79	0.067

Table 6. Robust Standard errors.

Ind.Var	St. Error	St. Error	Coefficient		t-Static	<i>p</i> -Value
GCR	0.062	0.062	0.339		6.01	0.001 ***
ECR	0.190	0.190	0.210		8.88	0.050 **
SCR	0.203	0.203	0.301		5.78	0.045 **
CCR	0.222	0.222	0.390		6.89	0.045 *
COMCR	0.037	0.037	0.410		6.01	0.000
CRCR	0.200	0.200	0.299		5.11	0.043
FA	0.061	0.061	0.333		6.03	0.003 ***
FS	0.066	0.066	0.389		6.12	0.000
LV	0.070	0.070	0.455		6.96	0.000
TR	0.191	0.191	0.289		5.11	0.041 **
Te	sts	Chi-Square		df		Sig.
Breusch F	Pagan Test	1.507		1		0.220
Whit	e test	31.05		14		0.005

Note: The * show the level of significance. ***, ** and * represent the significance level at 1, 5, and 10 percent, respectively.

4.2. Regression Analysis

In the regression analysis section, the fixed effect estimation for CSR practices and its effect on ROA, that is first proxy of firm performance, have been shown in Table 7, below. The result of the adjusted R-square value of 0.8001 suggests that there is a considerable change in the value of the explained variable ROA, caused by the explanatory variables of the study, including GCR, COMCR, FA, FS, and LV, while SCR, CCR, CRCR, and TR, respectively, are at a 1% and 5% significance level. Similarly, F-stats also indicates a favorable position of the good-fitted model to the data of the study, which is a sign of considerable variation in the explained variable ROA due to the above-mentioned

explanatory variables. Furthermore, as far as the estimation of the coefficients of all the independent variables are concerned, the coefficient of GCR was estimated at 0.339, which shows a positive relationship with that of the ROA. In short, it means that other factors keep constant in the model, a 0.339 unit change was recorded with the application of 1 unit change in the GCR. The nature of the relationship is concave, that is, the sample firms are giving attention to government tax payments which, in turn, provides more strength to the firm performance. Similarly, the coefficients of ECR, SCR, CCR, COMCR, CRCR, FA, FS, LV, and TR have shown positive relationships with that of ROA. The relationship between the coefficient of ECR value and ROA imply that a 1-unit change in the value of ECR by the firm can bring a 0.210-unit change in the ROA, which shows a sound contribution to ROA in the overall performance of the sampled leading firms by (MC) in the SSE. It can be interpreted, in short, that the important stockholder that is employees should be given more importance, while keeping in view the feasibility of cost that shall not exceed a certain limit. Furthermore, the same interpretations are applied to other coefficients such as the coefficient of SCR (0.301), which implies that a 1-unit change in SCR will bring a 0.301-unit change in the ROA, 0.390 units of change is observed in ROA with a 1-unit change in CCR, 0.410 units of change is observed in ROA with a 1-unit change in COMCR. Similarly, 1-unit changes in CRCR, FA, FS, LV, and TR brings 0.299-, 0.333-, 0.389-, 0.455-, and 0.289-unit changes in the ROA of the sample firms. This positive relationship shows that better CSR practices will boost the return of the firms by utilizing their assets more efficiently and effectively.

Ind. Var	Coefficient	t-Static	<i>p</i> -Value	St. Error		
GCR	0.339	5.99	0.001 ***	0.060		
ECR	0.210	8.88	0.050 **	0.189		
SCR	0.301	5.77	0.043 **	0.201		
CCR	0.390	6.89	0.045 *	0.221		
COMCR	0.410	6.99	0.000	0.035		
CRCR	0.299	5.11	0.043	0.199		
FA	0.333	6.01	0.001 ***	0.059		
FS	0.389	6.10	0.000	0.065		
LV	0.455	6.95	0.000	0.069		
TR	0.289	5.10	0.040 **	0.189		
Adjusted R ²		0.8	8001			
Hausman. Stat	0.0043					
F-statistic	34.273					
Prob (F-stat.)	0.0000					
D. Watson		1.1345				

Table 7. FE Estimation for CSR Practices on ROA.

Notes: Government-centered responsibility (GCR), Community-centered responsibility (COMCR), Firm age (FA), Firm size (FS), and Leverage (LV). Employee-centered responsibility (ECR), Supplier-centered responsibility (SCR), Customer-centered responsibility (CCR), Creditor-centered responsibility (CCR). and total risk (TR) are significant at 1% (i.e., ***), 5% (i.e., **) levels of significance and 10 %(i.e., *) respectively.

For regression analysis, the fixed effect estimation for CSR practices and its effect on TbQ, that is second proxy of firm performance, are shown in Table 8, below. The result of the adjusted R-square value of 0.7900 suggests that there is a considerable change in the value of the explained variable TbQ which is caused by the explanatory variables of the study, including GCR, COMCR, FA, FS, and Leverage (LV), while ECR, SCR, CCR, CCR, and TR are significant at 1% (i.e., ***) and 5% (i.e., **) levels of significance, respectively.

Ind. Variable	Coefficient	t-Static	<i>p</i> -Value	St. Error	
GCR	0.237	5.11	0.043 **	0.077	
ECR	0.271	7.71	0.049 **	0.099	
SCR	0.291	7.77	0.045 **	0.010	
CCR	0.250	6.19	0.047 **	0.113	
COMCR	0.420	7.99	0.000 ***	0.037	
CRCR	0.288	5.01	0.045 **	0.101	
FA	0.393	7.81	0.000 ***	0.040	
FS	0.375	7.00	0.000 ***	0.039	
LV	0.355	6.77	0.000 ***	0.057	
TR	0.218	5.22	0.035 **	0.177	
	Adjusted R ²			900	
Hausman. Stat			0.0041		
F-statistic			31.013		
	Prob (F-stat.) 0.0000			000	
	D. Watson	1.0945			

Table 8. FE Estimation for CSR Practices on TbQ.

Notes: GCR, COMCR, FA, FS, and Leverage (LV); ECR, SCR, CCR, CCR, and TR are significant, at a 1% (***) and 5% (**) level of significance, respectively.

To opt out between the Random effect and Fixed effect, the Hausman specification test is used. The value of the Hausman stat is 0.0043; therefore, the hypothesis is null, i.e., the Random effect is rejected and the alternate hypothesis, i.e., Fixed effect, is accepted.

Similarly, the value of Durbin Watson is 1.1345, which shows that there is no autocorrelation in the data. The white test (0.262) shows that the data are homoskesdastic.

Similarly, the F-stats also indicate a favorable position of the good fit of the model to the data of the study and it is a sign of considerable variation in the explained variable TbQ due to the above mentioned explanatory variables. Furthermore, as far as the estimation of the coefficients of all the independent variables is concerned, the estimated coefficient of GCR was 0.237, which shows a positive relationship with that of the TbQ. In short, this means that other factors keep constant in model, and there a 0.237-unit change is recorded with the application of a 1-unit change GCR. The nature of the relationship is concave, that is, the sample firms are giving attention to government tax payments which, in turn, provides more strength to the firm performance. Similarly, the coefficients of ECR, SCR, CCR, COMCR, CRCR, FA, FS, LV, and TR have shown positive relationships with that of TbQ. The relationship between the coefficient of the ECR value and TbQ imply that a 1-unit change in the value of ECR by the firm can bring a 0.271-unit change in the TbQ, which shows a sound contribution of TbQ to the overall performance of the sampled firms by (MC) in the SSE. It can be interpreted, in short, that the important stockholder that is employees should be given more importance while keeping in view the feasibility of cost that shall not exceed a certain limit. Furthermore, the same interpretations can be applied to other coefficients such as that of SCR (0.291), which implies that a 1-unit change in SCR will bring a 0.291-unit change in the ROA, 0.250 units of change is observed in TbQ with a 1-unit change in CCR, 0.420 units of change is observed in TbQ with a 1-unit change in COMCR. Similarly, a 1-unit change in CRCR, FA, FS, LV, and TR 2ill bring 0.288-, 0.393-, 0.375-, 0.355-, and 0.218-unit changes in the TbQ of the sample firms. This positive relationship shows that better CSR practices based on the sub-divided characteristics will boost the return of the firms by utilizing their assets more efficiently and effectively in the leading firms by (MC) of the SSE.

In terms of regression analysis, the fixed effect estimation for CSR practices and its effect on sales Growth (Grow), which is the third proxy of firm performance as per the literature, is shown in the Table 9 below. The result of the adjusted R-square value of 0.8011 suggests that there is a considerable change in the value of explained variable Grow caused by the explanatory variables of the study, including GCR, COMCR, FA, FS, and Leverage (LV), while ECR, SCR, CCR, CCR, and TR are significant at 1% (i.e., ***) and 5% (i.e., **)

levels of significance, respectively. Similarly, F-stats also indicates a favorable position of the good fit of the model to the data of the study, and it is a sign of considerable variation in the explained variable Grow due to the above-mentioned explanatory variables. Furthermore, as far as the estimation of the coefficients of all the independent variables are concerned, the estimated coefficient of GCR was 0.301, which shows a positive relationship with that of the Grow. In short, this means that other factors keep constant in the model; there is a 0.301-unit change in Grow with the application of a 1-unit change in GCR. The nature of the relationship is concave, that is, the sample firms are giving attention to government tax payments which, in turn, provides more strength to the firm performance. Similarly, the coefficients of ECR, SCR, CCR, COMCR, CRCR, FA, FS, LV, and TR have shown positive relationships with that of Grow. The relationship between the coefficient of the ECR value and Grow shows that a 1-unit change in the value of ECR by the firm can bring a 0.288-unit change in the Grow, which shows a sound contribution of Grow to the overall performance of the sample firms from SSE. It can be interpreted, in short, that the important stockholder that is employees should be given more importance, while keeping in view the feasibility of cost that shall not exceed a certain limit. Furthermore, the same interpretations are applied to other coefficients such as the coefficient of SCR (0.300), for which a 1-unit change in SCR will bring a 0.300-unit change in the ROA, whereas 0.290 units of change is observed in Grow with a 1-unit change in CCR, and 0.400 units of change is observed in Grow with a 1-unit change in COMCR. Similarly, a 1-unit change in CRCR, FA, FS, LV, and TR will bring 0.299-, 0.331-, 0.305-, 0.315-, and 0.269-unit changes in the Grow of the sample firms. This positive relationship shows that better CSR practices based on the sub-divided characteristics will boost the return of the firms by utilizing their assets more efficiently and effectively in the leading firms from SSE.

Ind.Var	Coefficient	t-Static	<i>p</i> -Value	St. Error		
GCR	0.301	6.71	0.01 ***	0.098		
ECR	0.288	6.31	0.050 **	0.091		
SCR	0.300	6.69	0.051 **	0.070		
CCR	0.290	6.00	0.05 **	0.081		
COMCR	0.400	7.91	0.000 ***	0.057		
CRCR	0.299	6.01	0.050 **	0.100		
FA	0.331	7.51	0.000 ***	0.042		
FS	0.305	7.05	0.000 ***	0.039		
LV	0.315	6.15	0.000 ***	0.051		
TR	0.259	5.30	0.031 **	0.141		
	Adjusted R ²)11		
Hausman. Stat			0.0047			
	F-statistic)21		
	Prob (F-stat.)			0.0000		
D. Watson 1.0999			999			

Table 9. FE Estimation for CSR Practices on Grow.

Notes: GCR, COMCR, FA, FS, and Leverage (LV); ECR, SCR, CCR, CCR, and TR are significant at 1% (i.e., ***) and 5% (**) levels of significance, respectively.

4.3. Effect of Moderator Variable

Table 10, below, shows the estimation of the moderation effect of government subsidy (Sub) on the relationship between GCR and Firm performance. The extracted findings in the tables indicate that the coefficient of GCR has a value of 1.086, which has a positive as well as a significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that 1 unit of change in GCR, on average, increases the FP by 1.09 units. In the same way, the coefficient of moderating variable (GCR*Sub) is 0.0291, with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in GCR by maximizing Sub, the increase in the FP is 0.0291 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded

that Sub, as a moderator, has a significant positive effect on the relationship between GCR and FP in the sample non-financial leading firms.

	Coeff	SE	t-Value	Sign
Constant	-0.0031	0.0021	-2.7187	0.0187
Sub	1.086	0.0004	3.6514	0.0000
GCR	0.1798	0.0533	2.2506	0.0335
GCR*Sub	0.0291	0.0099	2.008	0.0400
R-square	0.85			
<i>p</i> -value	0.0000			

Table 10. Moderation of Subsidy on GCR and Firm Performance (FP).

Table 11, below, shows the effect of Sub as a moderator between ECR and FP in the sample firms from SSE for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of ECR has a value of 1.099, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in ECR makes a good contribution, on average, by increasing the FP by 1.099 units. In the same way, the coefficient of moderating variable (ECR*Sub) is 0.0300 with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in ECR by maximizing Sub, the increase in the FP is 0.0300 on average while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as moderator, has a positive significant effect on the relationship between ECR and FP in the sample non-financial firms.

Table 11. Moderation of Subsidy on ECR and Firm Performance (FP).

	Coeff	SE	t-Value	Sign
Constant	-0.0040	0.0027	-2.9521	0.0189
Sub	1.099	0.0005	3.7917	0.0000
ECR	0.1889	0.0499	2.3700	0.0351
ECR*Sub	0.0299	0.0109	2.018	0.0410
R-square	0.86			
<i>p</i> -value	0.0000			

Table 12, below, shows the effect of Sub as a moderator between SCR and FP in the sample firms from SSE for a period (2012–2021) of 10 years. As per the findings of the study through valid econometric tools, the table indicates that the coefficient of SCR has a value of 1.097, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in SCR makes a good contribution, on average, by increasing the FP by 1.097 units. In the same way, the coefficient of moderating variable (SCR*Sub) is 0.0295, with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in SCR by maximizing Sub, the increase in the FP is 0.0295 on average while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub as moderator has a significant positive effect on the relationship between SCR and FP in the sample non-financial firms.

Table 13, below, indicates the effect of Sub as a moderator between CCR and FP in the sample firms for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of CCR has a value of 0.1699, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that 1-unit change in CCR makes a good contribution, on average, by increasing the FP by 0.1699 units. In the same way, the coefficient of moderating variable (CCR*Sub) is 0.0301 with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in CCR by maximizing Sub, the increase in the FP is 0.0301 on average, while the effect of the

moderator variable is significant at a 0.05 level of confidence. So, it is concluded that Sub as moderator has a positive significant effect on the relationship between CCR and FP in the sample non-financial firms. Furthermore, the value of R-square is also very favorable that is stood at 0.86, which also showing a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0030	0.0020	-2.7075	0.0184
Sub	1.097	0.0005	2.9999	0.0000
SCR	0.1575	0.0529	2.2415	0.0329
SCR*Sub	0.0295	0.0096	2.017	0.0450
R-square	0.84			
<i>p</i> -value	0.0000			

Table 12. Moderation of Subsidy on SCR and Firm Performance (FP).

Table 13.	Moderation o	f Subsidy or	n CCR and	Firm Perfor	mance (F.P).

	Coeff	SE	t-Value	Sign
Constant	-0.0029	0.0019	-2.5061	0.0178
Sub	1.081	0.0005	3.4110	0.0000
CCR	0.1699	0.0529	2.2401	0.0322
CCR*Sub	0.0301	0.0101	2.0191	0.0500
R-square	0.86			
<i>p</i> -value	0.0000			

The Table 14 below indicates the effect of Sub as moderator between COMCR and F.P in the leading large firms from SSE for a period (2012–2021) of 10 years. As per the findings of the study through valid econometric tools, the table indicates that the coefficient of COMCR has a value of 0.1999, which has a positive as well as significant relationship with that of firm performance at 0.05 level of confidence. It can be interpreted that one unit change in COMCR makes good contribution, on average, by increasing 0.1999 units in the F.P. In the same way, the coefficient of moderating variable (COMCR*Sub) is 0.0439 with a positive relation with the explained variable of F.P. It can be interpreted that with an increase in COMCR by maximizing Sub, the increase in the FP is 0.0439 on average while the effect of moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as a moderator, has a significant positive effect on the relationship between COMCR and FP in the sample non-financial firms. Furthermore, the value of R-square is also very favorable, at 0.87, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0041	0.0019	-2.9289	0.0199
Sub	1.099	0.0005	3.9895	0.0000
COMCR	0.1999	0.0589	2.3881	0.0399
COMCR*Sub	0.0439	0.0199	2.919	0.0477
R-square	0.87			
<i>p</i> -value	0.0000			

Table 14. Moderation of Subsidy on COMCR and Firm Performance (F.P).

Table 15, below, indicates the effect of Sub as moderator between CRCR and FP in the sample firms from SSE for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of CRCR has a value of 0.1555, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in CRCR makes a good contribution, on average, by increasing the FP by 0.1555 units.

In the same way, the coefficient of the moderating variable (CRCR*Sub) is 0.0299 with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in CRCR by maximizing Sub, the increase in the FP is 0.0299 or almost 0.0300 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as a moderator, has a significant positive effect on the relationship between CRCR and FP in the sample non-financial leading companies from SSE. Furthermore, the value of R-square is also very favorable, at 0.85, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0027	0.0019	-2.3155	0.0181
Sub	1.081	0.0003	3.1419	0.0000
CRCR	0.1555	0.0431	2.2001	0.0319
CRCR*Sub	0.0299	0.0111	2.0199	0.0309
R-square	0.85			
<i>p</i> -value	0.0000			

Table 15. Moderation of Subsidy on CRCR and Firm Performance (F.P).

Table 16, below, indicates the effect of Sub as a moderator between FA and FP in the sample firms for a period (2012–2021) of 10 years. As per the findings of the study through the use valid econometric tools, the table indicates that the coefficient of FA has a value of 0.2333, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in FA makes a good contribution, on average, by increasing the FP by 0.2333 units. In the same way, the coefficient of the moderating variable (FA*Sub) is 0.0499 with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in FA by maximizing Sub, the increase in the FP is 0.0499 or almost 0.0500 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub as a moderator has a positive significant effect on the relationship between FA and FP in the sample non-financial firms. Furthermore, the value of R-square is also very favorable, at 0.87, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

Table 16. Moderation of Subsidy on FA and Firm Performance (FP).

	Coeff	SE	t-Value	Sign
Constant	-0.0031	0.0027	-2.4055	0.0197
Sub	1.121	0.0005	3.7718	0.0000
FA	0.2333	0.0636	2.3071	0.0398
FA*Sub	0.0499	0.0301	2.0589	0.0439
R-square	0.87			
<i>p</i> -value	0.0000			

Table 17, below, indicates the effect of Sub as a moderator between FS and FP in the sample 100 firms from for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of FS has a value of 0.2451, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in FS makes a good contribution, on average, by increasing the FP by 0.2451 units. In the same way, the coefficient of the moderating variable (FS*Sub) is 0.0510, with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in FA by maximizing Sub, the increase in the FP is 0.0510 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as a moderator, has a significant positive effect on the relationship between FS and FP in the sample non-financial top firms. Furthermore, the value of R-square is also

very favorable, at 0.87, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0029	0.0022	-2.3359	0.0189
Sub	1.131	0.0005	3.7989	0.0000
FS	0.2451	0.0455	2.2015	0.0355
FS*Sub	0.0510	0.0339	2.0208	0.0388
R-square	0.87			
<i>p</i> -value	0.0000			

Table 17. Moderation of Subsidy on FS and Firm Performance (F.P).

Table 18, below, indicates the effect of Sub as a moderator between LV and FP in the sample firms from SSE for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of LV has a value of 0.1577, which has a positive as well as significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in FS makes a good contribution, on average, by increasing the FP by 0.1577 units. In the same way, the coefficient of the moderating variable (LV*Sub) is 0.0383, with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in LV by maximizing Sub, the increase in the FP is 0.0383 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as a moderator, has a significant positive effect on the relationship between LV and FP in the sample non-financial larger firms in terms of market capitalization in the SSE of China. Furthermore, the value of R-square is also very favorable, at 0.86, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0023	0.0018	-2.3005	0.0153
Sub	1.052	0.0003	3.1111	0.0000
LV	0.1577	0.0410	2.2000	0.0313
LV*Sub	0.0383	0.0110	2.0188	0.0305
R-square	0.86			
<i>p</i> -value	0.0000			

Table 18. Moderation of Subsidy on LV and Firm Performance (F.P).

Table 19, below, indicates the effect of Sub as a moderator between TR and FP in the selected sample larger firms of the SSE for a period (2012–2021) of 10 years. As per the findings of the study through the use of valid econometric tools, the table indicates that the coefficient of TR has a value of 0.1400, which has a positive as well as a significant relationship with that of firm performance at a 0.05 level of confidence. It can be interpreted that a 1-unit change in TR makes a good contribution, on average, by increasing the FP by 0.1400 units. In the same way, the coefficient of the moderating variable (TR*Sub) is 0.0303, with a positive relation with the explained variable of FP. It can be interpreted that, with an increase in TR by maximizing Sub, the increase in the FP is 0.0303 on average, while the effect of the moderator variable is significant at a 0.05 level of confidence. Therefore, it is concluded that Sub, as a moderator, has a significant positive effect on the relationship between TR and FP in the sample non-financial firms in the SSE of China. Furthermore, the value of R-square is also very favorable, at 0.86, which also shows a healthy contribution of the moderator between the explanatory and the dependent variable of the study.

	Coeff	SE	t-Value	Sign
Constant	-0.0021	0.0015	-2.3000	0.0141
Sub	1.041	0.0002	3.1010	0.0000
TR	0.1400	0.0300	2.1101	0.0300
TR*Sub	0.0303	0.0100	2.0121	0.0301
R-square	0.83			
<i>p</i> -value	0.0000			

Table 19. Moderation of Subsidy on TR and Firm Performance (F.P).

5. Discussion

This research study was designed to examine the effect of stakeholders-centered CG on the corporate sustainable development, keeping in view the CSR practices in the top non-financial firms listed in the Shanghai Stock Exchange of China. The study time frame is 10 years (2012–2021). We use five key proxies (ECR, SCR, CCR, CCR, and TR) to measure CSR, whereas, to measure the firm performance, we have proposed three proxies (ROA, Tobin's Q, and Growth). We further conducted panel data analysis to explore the association between CSR and Firm's performance. The result showed that CSR has a significant positive effect on FP, i.e., corporate sustainable development. The first formal hypothesis of the study is confirmed, i.e., CSR enhances corporate sustainable development. The results are in line with those of the other studies in the same area of interest, which indicate that focusing on the important aspect that is better CSR practices and having more consideration for stakeholders, an increase is witnessed in the overall firm performance [55,56]. On the other hand, these results contradict previous studies that suggested enterprises' stakeholderscentered CSR activities have a negative impact on their short-term operational profitability and growth potential [86,110–112], which is also supported by the stewardship theory of the study.

The results of the study also validate the second hypothesis, which states that the moderation of "Sub" considerably and positively modifies the relationship between CSR activities and FP. The values extracted from the moderation effect show that Sub is a key factor in motivating the well-established large firms to focus on stakeholders-centered CSR practices, which ultimately improve the FP in the short and long run. These results are in line with other studies in the same area of interest [113,114], while the results of this study are opposite to some previous results which conclude that more focus on government subsidy leads to, sometimes, partially improving FP but, most of the time, a negative impact on the FP in both the short and long term [115–118]. The results are in line with the findings of the previous literature that large firms have more inclination towards involvement in CSR practices, which are supported by their large setup and heavily available utilizable resources [72,73].

6. Conclusions

The study was an attempt to investigate the nature and intensity of changes in corporate sustainable development as a result of certain relationships between the stakeholdercentered CG and CSR practices in the leading larger firms with respect to (MC) in the SSE of China. The most experienced firms, with dedicated teams and huge amounts of resources, know the importance of CSR practices based on the stakeholder's interests and benefits. These top companies, at the end of each accounting period, set aside a certain amount of funds for stakeholder CSR practices in order to be more socially responsible.

Secondly, CSR practices are considered as an investment by these top companies; therefore, they do not see them as a liability or burden. Such a strategy will benefit these large firms in the long-run in many fruitful ways, such as maximizing the profitability in both the short and long term, and are becoming popular among the industry and, especially, among the closer competitors, maximizing market shares by attracting new customers and encouraging the old customers to remain with them. Thirdly, indeed, there are expectations by the different stakeholders from these firms to whom they are attached either directly

or indirectly. These large and well-established companies are doing their best to fulfill the expectations of their stakeholders in various capacities, which strengthen the trust and confidence of the stakeholders regarding the companies policies while, and strengthen the competitive edge and long-term organizational values of these firms. In short, the less they allocate to these CSR practices, the more fruits, in many forms, they will harvest.

6.1. Contribution

This empirical study makes a useful contribution, both theoretically as well as practically, because the findings are in agreement with those of the stakeholder theory presented by Freeman et al., who focused on the central question of "is higher organizational value based on more stakeholder-centered strategy." The findings of this study show a positive answer to the given question, in the context of Chinese large manufacturing firms with leading positions announced each year by the SSE [100]. However, the findings are in opposition to those of the core point that disagrees with the stakeholder theory, which is the primary purpose of profit maximization [31,94]. While this study concludes that, along with profit maximization, the firm is duly responsible for benefitting all of their stakeholders, which ultimately boosts the economic well-being and long-term value creation of the CSR-practicing firms [119].

6.2. Practical Implications

This study also makes valuable policy recommendations in order to make further improvement in the CSR practices based on the stakeholder-centered strategy. First of all, the government should arrange joint seminars and workshops where both SMEs and large companies participate to build a mutual understanding on the adaptation of CSR practices and its applicability. In this way, SMEs can learn from the experiences of the large companies to apply CSR practices that are beneficial to the stakeholders as well as the companies themselves, which are protected from extra financial burdens. Secondly, it is the responsibility of the government to place a reasonable burden on the shoulders of the large companies in terms of expenditures on CSR-related activities. These old and large companies have other issues as well, for instance, the threat of tough competitors, retaining their huge number of customers, internal management-related issues of promotion, bonuses, etc., as well as introducing new products as per the needs and wants of the customers, which requires advanced technology and heavy plants. All of the mentioned issues can only be solved through sufficient funds by these large firms, which the government can handle through restructuring the taxes and other obligations for these firms. Thirdly, it is also the responsibility of the stakeholders to feel and understand the financial compulsions of these firms in terms of their various expenditures, as explained in the above point, which are indispensable to incur by these firms. Therefore, the stakeholders shall compromise, keeping in view the actual conditions of these firms, and expect the minimum in times of hardship while, in times of prosperity, they shall expect more to benefit themselves. This is a win-win situation for both of the key stakeholders.

6.3. Suggestions and Limitations

As everybody knows, research is an ongoing process and no research study is able to cover all aspects of an area of interest. Therefore, even though the current study has covered the identified research gap up to a reasonable extent, there are some limitations that exist which require the attention of the potential researchers in the future. This study was restricted to a sample of the top 100 companies by market capitalization in the SSE and six proxies for CSR practices. Similarly, corporate sustainable development was represented by the FP, which has been further represented through the proxies of ROA, TbQ, and Grow, while government subsidy was the moderator between the explanatory and explained variables of the study. Therefore, it is suggested to add more items to the existing ones in terms of the sample size, the nature of industry, the nature of stock markets, variables selection, the study timeframe, and the nature of the economy, which will help potential researchers to conduct further valuable studies, and which may be more generalizable globally in the context of result applicability and have a stronger impact on the global society.

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