

## Article

# Corporate Social Responsibility Practices in China: Trends, Context, and Impact on Company Performance

Kun Li <sup>1,\*</sup> , Nasrin R. Khalili <sup>2</sup> and Weiquan Cheng <sup>2</sup><sup>1</sup> Business School, Beijing Normal University, Beijing 100875, China<sup>2</sup> Stuart School of Business, Illinois Institute of Technology, Chicago, IL 60616, USA; khalili@iit.edu (N.R.K.); wcheng15@hawk.iit.edu (W.C.)

\* Correspondence: kunli@bnu.edu.cn; Tel.: +86-10-588-078-47

Received: 10 December 2018; Accepted: 3 January 2019; Published: 11 January 2019



**Abstract:** This study analyzes the trends, context, and impact of corporate social responsibility (CSR) initiatives on company's performance and productivity in China. We use environmental and social responsibility data in 34,000 CSR projects released by 839 companies in 31 provinces from 2006 to 2016. Clustering methods as well as ordinary least squares and the fixed effects panel regression modeling are performed to provide insights on the context, trends, and impact of CSR projects on companies' productivity and financial outcomes. Results of data processing and modeling indicate that: (a) most projects focused on improving companies' environmental sustainability (compared to social); (b) implementation of both environmental and social projects had positive impacts on companies' performance; and (c) trends, context, and impact of the projects varied with time, company type, and location (provinces). In addition, data suggest that companies operating in regions with lower economic conditions (GDP per capita) seem to be less motivated to implement environmental and social sustainability projects compared to those operating in regions with higher economic conditions. This study is meaningful for both companies that consider adopting CSR initiatives, as well as stakeholders and managers who aim to promote sustainable development in China.

**Keywords:** corporate social responsibility; cleaner production; company performance; China sustainability; environmental sustainability; social sustainability

## 1. Introduction

Companies' actions with regards to their social and environmental responsibilities are advancing due to global changes, and the way the role of business is perceived in promoting and supporting sustainable development beyond philanthropy and impact mitigation. These advancements are becoming more evident with increase in globalization and emergence of privatization of the public goods and services [1,2]. While the role of companies in promoting and securing sustainability and sustainable development is regarded especially by public and government sectors [3,4], companies that face consumer and civil society pressure have higher probability of adopting sustainable business strategies compared to those which do not face such pressures [5]. Consistent with this finding, recent studies provide evidence of increasing prominence of different types of sustainable business models over time, in particular indicating that large capitalized firms have mostly adopted environmentally-oriented models and to a much lesser extent the societal and organizational ones [6].

Assessing global trends in recent years reveals that most economic development sectors increasingly promote both environmental protection and social welfare while creating economic value. More specifically, industrial sectors and corporations have been focusing on improvement of

human life and welfare, as well as conservation of the ecological resources (materials), by providing the financial support needed to maintain environmental protection and social welfare activities of the corporations [7]. These trends also encourage an expansion of the disclosure of corporate actions related to environmental and social responsibility [8,9]. The disclosure usually is in the form of stand-alone sustainability projects released by companies [10]. This trend spreads over the world and in diverse groups of industries. According to the investigation by Klynveld Peat Marwick Goerdeler (KPMG) [11], 95% of the large companies in the world have released business sustainability projects on an annual basis. Such companies are from diverse industries (e.g., minerals, gas, oil, and finance).

These projects indicate that most business sustainability strategies conform to principles of corporate citizenship, sustainable entrepreneurship, triple bottom line (TBL), business ethics, and especially corporate social responsibility (CSR) [12]. Defined by the World Business Council on Sustainable Development (WBCSD), CSR is a concept that embraces “the integration of social and environmental values within a company’s core business operations” and includes the social (e.g., community programs), economic (e.g., employment), and environmental (e.g., waste reduction) aspects of business activities in collective actions [13–15]. Inclusion of environmental sustainability projects through application of cleaner production initiatives and health and safety programs for social protection under the umbrella of CSR has become a common, legitimate, and smart practice in most industries.

According to principles of pollution prevention issued by the United States Environmental Protection Agency (US EPA, 1998), environmental sustainability projects under CSR consist of six main components: waste reduction; non-polluting production (focusing on protection of air, water, and soil protection); production energy efficiency; safe and healthy work environments; environmentally sound products; and environmentally sound packaging. These CSR-related projects influence companies’ daily operation and impact the future of sustainable development. Many recent studies also confirm the importance of CSR projects [16,17] and consider them as a preventive strategy to minimize the impact of production on the environment [18–20] and a powerful tool of corporate sustainability in various industries [21,22].

As corporate environmental disclosures, CSR projects are in accordance with the interests of diverse parties including investors, managers, employees, customers, regulators, and government [23–26]. The economic impact of undertaking CSR projects on companies, however, is an element that is not well defined. As shown in Table 1, analyses of the randomly selected studies on the impact of CSR on companies’ performance (1985–2018) are unsettled; while some indicate that CSR projects and practices could improve a company’s business performance others either deny it or state that the impact is either hard to measure or neutral [27–48].

Such discrepancies in the literature make it both essential and legitimate to study the impact of undertaking CSR projects on a company’s economic performance, as well as to examine the conditions under which CSR projects not only could address environmental and sustainable issues but could also improve the company’s performance and profitability.

The main objective of this study is to address the discrepancies in the CSR literature by providing evidence that there is a positive correlation between environmental/sustainable practices and company performance. To meet our goals, we test impact of implementing CSR projects on companies’ sustainability in China, the largest developing country. Using a large set of data, including all the released CSR projects by companies from diverse industries between 2006 and 2016, we first characterize the trends and context of CSR initiatives in China, then make hypothesis tests to examine whether CSR initiatives could result in financial benefits for companies while protecting environmental and social welfare.

This study makes three contributions. First, this study provides a comprehensive analysis of the trends in CSR projects undertaken by companies in China. It sorts companies in China and their CSR projects according to the local economic growth status (high, medium, and low GDPs). The coverage of the impact assessments on companies involves all the province-level divisions of China and the most recent 11 years.

**Table 1.** Impact of CSR on companies' performance/profitability.

| Reference                                                                                                                                                                                                                                    | Finding                                                                                                                                                                                                                                                                 | Link                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. (1985). An Empirical Examination of the Relationship between Corporate Social Responsibility and Profitability. <i>Academy of Management Journal</i> , 28(2), 446–463. [31]               | Using an elaborate, forced-choice instrument administered to corporate CEOs, did not find any relationship between social responsibility and profitability. Specifically, varying levels of social orientation were not found to correlate with performance differences | Published: 30 November 2017<br><a href="https://doi.org/10.5465/256210">https://doi.org/10.5465/256210</a>                                                                                                           |
| McGuire, J. B., Sundgren, A., & Schneeweis, T. (1988). Corporate Social Responsibility and Firm Financial Performance. <i>Academy of Management Journal</i> , 31(4), 854–872. [32]                                                           | Firm's prior performance, assessed by both stock-market returns and accounting-based measures, is related to corporate social responsibility                                                                                                                            | Published: 30 November 2017<br><a href="https://doi.org/10.5465/256342">https://doi.org/10.5465/256342</a>                                                                                                           |
| McWilliams, A., & Siegel, D. (2001). Corporate Social Responsibility: A Theory of the Firm Perspective. <i>Academy of Management Review</i> , 26(1), 117–127. [33]                                                                           | There is an 'ideal' level of CSR, which managers can determine via cost-benefit analysis, and a neutral relationship between CSR and financial performance                                                                                                              | Published: 1 January 2001<br><a href="https://doi.org/10.5465/amr.2001.4011987">https://doi.org/10.5465/amr.2001.4011987</a>                                                                                         |
| Barnett, M. L. (2007). Stakeholder Influence Capacity and the Variability of Financial Returns to Corporate Social Responsibility. <i>Academy of Management Review</i> , 32(3), 794–816. [34]                                                | The impact of CSR on corporate social performance varies from one firm to another. Situational contingencies affect the relationship between CSR and firm financial performance                                                                                         | Published: 1 July 2007<br><a href="https://journals.aom.org/doi/abs/10.5465/AMR.2007.25275520">https://journals.aom.org/doi/abs/10.5465/AMR.2007.25275520</a>                                                        |
| Tixier, M. (2009). Will Sustainable Management be a Clear Differentiator for Tour Operators? <i>Anatolia</i> , 20(2), 461–466. [35]                                                                                                          | Studying the tourism industry revealed that CSR helps specialty tour operators attract customers and increase profitability in tourism business                                                                                                                         | Published: 25 June 2012<br><a href="https://www.tandfonline.com/doi/abs/10.1080/13032917.2009.10518923?journalCode=rana20">https://www.tandfonline.com/doi/abs/10.1080/13032917.2009.10518923?journalCode=rana20</a> |
| Tziner, A. (2013). Corporative Social Responsibility (CSR) Activities in the Workplace: A Comment on Aguinis and Glavas (2013). <i>Revista de Psicología del Trabajo y de las Organizaciones</i> , 29(2). [36]                               | CSR could improve employees' productivity and thus increase firm's profitability                                                                                                                                                                                        | Published: 2013<br><a href="https://www.redalyc.org/html/2313/231328684007/">https://www.redalyc.org/html/2313/231328684007/</a>                                                                                     |
| Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate Social Responsibility and Access to Finance. <i>Strategic Management Journal</i> , 35(1), 1–23. [37]                                                                                | Corporations with better CSR performance have better access to finance and hence lower cost                                                                                                                                                                             | Published: 05 April 2013<br><a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.2131">https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.2131</a>                                                          |
| Warshawsky, D. N. (2016). Food Waste, Sustainability, and the Corporate Sector: Case Study of a US Food Company. <i>The Geographical Journal</i> , 182(4), 384–394. [38]                                                                     | CSR (food waste management) generates some financial benefits in the U.S. food industry. However, it is not considered as important as corporate profitability                                                                                                          | Published: 17 September 2015<br><a href="https://rgs-ibg.onlinelibrary.wiley.com/doi/abs/10.1111/geoj.12156">https://rgs-ibg.onlinelibrary.wiley.com/doi/abs/10.1111/geoj.12156</a>                                  |
| Yuan, X. (2017). Correction of Corporation Value Assessment Model Based on Corporate Social Responsibility. <i>Agricultural Science &amp; Technology</i> , 18(4). [39]                                                                       | Because the value and cost of CSR is difficult to access under the current accounting system, its impact on profitability is hard to measure                                                                                                                            | Published: April 2017<br><a href="https://search.proquest.com/docview/1961708060?pq-origsite=gscholar">https://search.proquest.com/docview/1961708060?pq-origsite=gscholar</a>                                       |
| Hategan, C. D., Sirghi, N., Curea-Pitorac, R. I., & Hategan, V. P. (2018). Doing Well or Doing Good: The Relationship between Corporate Social Responsibility and Profit in Romanian Companies. <i>Sustainability</i> , 10(4), 1041. [40]    | Companies that implement CSR are more profitable in economic terms                                                                                                                                                                                                      | Published: 1 April 2018<br><a href="https://www.mdpi.com/2071-1050/10/4/1041">https://www.mdpi.com/2071-1050/10/4/1041</a>                                                                                           |
| Hawn, O., Chatterji, A. K., & Mitchell, W. (2018). Do Investors Actually Value Sustainability? New Evidence from Investor Reactions to the Dow Jones Sustainability Index (DJSI). <i>Strategic Management Journal</i> , 39(4), 949–976. [41] | Firms may gain at least limited benefits from reliable CSR activities                                                                                                                                                                                                   | Published: 12 December 2017<br><a href="https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.2752">https://onlinelibrary.wiley.com/doi/abs/10.1002/smj.2752</a>                                                       |

Table 1. Cont.

| Reference                                                                                                                                                                                                                                                                | Finding                                                                                                                                                                             | Link                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Platonova, E., Asutay, M., Dixon, R., & Mohammad, S. (2018). The Impact of Corporate Social Responsibility Disclosure on Financial Performance: Evidence from the GCC Islamic Banking Sector. <i>Journal of Business Ethics</i> , 151(2), 451–471. [42]                  | CSR disclosure has a significant positive relationship with the financial performance                                                                                               | Published: August 2018<br><a href="https://link.springer.com/article/10.1007/s10551-016-3229-0">https://link.springer.com/article/10.1007/s10551-016-3229-0</a>       |
| Halme, M., Rintamäki, J., Knudsen, J. S., Lankoski, L., & Kuisma, M. (2018). When Is There a Sustainability Case for CSR? Pathways to Environmental and Social Performance Improvements. <i>Business &amp; Society</i> , 0007650318755648. [43]                          | Integrating social responsibility into the core business results in improving social performance                                                                                    | Published: 21 March 2018<br><a href="https://journals.sagepub.com/doi/abs/10.1177/0007650318755648">https://journals.sagepub.com/doi/abs/10.1177/0007650318755648</a> |
| Presley, A., Presley, T., & Blum, M. (2018). Sustainability and Company Attractiveness: A Study of American College Students Entering the Job Market. Sustainability Accounting, <i>Management and Policy Journal</i> . [44]                                             | Sustainability performance is an important factor in determining the attractiveness of a company to potential applicants                                                            | Published: 2018<br><a href="https://www.emeraldinsight.com/doi/abs/10.1108/SAMPJ-03-2017-0032">https://www.emeraldinsight.com/doi/abs/10.1108/SAMPJ-03-2017-0032</a>  |
| Voicu, D. Dragomir. (2018). How Do We Measure Corporate Environmental Performance? A Critical Review. <i>Journal of Cleaner Production</i> 196, 1124–1157. [45]                                                                                                          | A critical review of 172 papers is provided and new definition is given for corporate goals and reducing and preventing environmental harm                                          | Published: 2018<br><a href="https://doi.org/10.1016/j.jclepro.2018.06.014">https://doi.org/10.1016/j.jclepro.2018.06.014</a>                                          |
| Chen, Y.C., Hung, M. and Wang, Y. (2018). The Effect of Mandatory CSR Disclosure on Firm Profitability and Social Externalities: Evidence from China. <i>Journal of Accounting and Economics</i> , 65(1), pp.169–190. [46]                                               | Although the CSR reporting mandate in 2008 does not require firms to spend on CSR, they experience a decrease in profitability subsequent to the mandate                            | Published: 2018<br><a href="https://doi.org/10.1016/j.jacceco.2017.11.009">https://doi.org/10.1016/j.jacceco.2017.11.009</a>                                          |
| Feng, Y., Chen, H.H. and Tang, J. (2018). The Impacts of Social Responsibility and Ownership Structure on Sustainable Financial Development of China's Energy Industry. <i>Sustainability</i> (2071–1050), 10(2). [47]                                                   | Chinese energy companies should pay more attention to improving corporate social responsibility to maintain good economic performance and develop sustainable competitive advantage | Published: 2018<br><a href="https://www.mdpi.com/2071-1050/10/2/301">https://www.mdpi.com/2071-1050/10/2/301</a>                                                      |
| Anser, M.K., Zhang, Z. and Kanwal, L. (2018). Moderating Effect of Innovation on Corporate Social Responsibility and Firm Performance in Realm of Sustainable Development. <i>Corporate Social Responsibility and Environmental Management</i> , 25(5), pp.799–806. [48] | Significant direct relationship exists among CSR, innovation, and firm performance while moderating effect of innovation is absent between CSR and firm performance                 | Published: 2018<br><a href="https://doi.org/10.1002/csr.1495">https://doi.org/10.1002/csr.1495</a>                                                                    |

As a second contribution, this study sets up a company-level analysis, using a unique database that records all the corporate environmental disclosures in China from 2006 to 2016. We filter projects (for CSR initiatives) and then sort them by company. The data set for this period includes over 34,000 CSR projects released by 839 companies in China. Based on our research, this is the first study that collects and analyzes company-level CSR and corporate data in accordance with the latest financial studies [49]. This research provides new findings for previous literature [50,51] about the impact of CSR on company performance.

As the third contribution, this study investigates and compares the impacts of CSR projects on different aspects of company performance. We separately examine how the CSR practice affects the value of a company from the perspective of (1) investors and (2) managers.

The remainder of this paper is organized as follows. Section 2 describes sources of data and the methodological approach used for analysis of the announced CSR projects between 2006 and 2016 in China. Section 3 provides trends and context analysis of the CSR projects, while Section 4 examines impact of undertaking CSR projects on the corporate performance from investors' concerns as well as management perspectives and benefits. The conclusion of this study, contribution to the literature, and anticipated impact on companies and society as a whole are discussed in Section 5.

## 2. Methodological Approach

To our knowledge, this study is the first that comprehensively captures companies' CSR actions in China using a very large data set extracted from the China Stock Market & Accounting Research (CSMAR) database. As analysis will indicate in Sections 3 and 4, since 2006 there have been over 34,000 CSR project announcements released by 839 companies in China. One company alone released 40 announcements during 2006 and 2016. The methodological approach used to process such a large data set consists of two parts. In part one (Section 3), we perform CSR content analysis based on systematic classification of the data. This approach allows us to understand the nature and characteristics of CSR projects that companies focused on during this period, as well as their variations according to industry type and location. In part two (Section 4), our research efforts focused on analyzing the impact of CSR projects on a company's performance and the management benefits using OLS modeling approaches.

All data in this study extracted from announced CSR projects that directly projected to and verified by China Securities Regulatory Commission (CSRC) standards. CSRC is an institution of the State Council of China and is the main regulator of the securities industry in China.

## 3. CSR in China: Performance, Trend, and Context

### 3.1. Trends and Numbers of CSR Projects

We first observed the development of CSR projects through company projects. Figure 1 depicts the number of CSR projects reported by companies in China between 2006 and 2016. Chinese companies adopted CSR projects between 2006 and 2013 with increasing rates. The trend, however, decreased after 2013, resulting in 4167 projects in 2016. The upward trend between 2006 and 2013 was associated with the development of environmental sustainability, such as the encouragement of cleaner production by the Chinese government in 2013. The decreasing trend after 2013 was associated with the increase in the costs of the projects and the decrease of financial supports from the government and other sources.

Second, we analyzed data across the 31 province-level divisions in China (excluding Hong Kong, Macau, and Taiwan). We sorted all involved companies by the province where their registered locations are, and then categorized companies' projects by province. As shown in Figure 2, as representative of the modern China, companies in Shanghai had almost 7000 projects since 2006. By contrast, there were only 28 projects by companies located in Gansu Province. The difference is associated with inequality in socioeconomic dimensions of these two provinces. Furthermore, as indicated in Figure 3, Shanghai managed to rank first with an average number of 92 projects per company, compared to Gansu with an average of 7. Both figures depict the spatial and geographic unevenness of companies'

efforts toward addressing environmental and social responsibility projects. These results show the impact of companies' participation on CSR adoption in different provinces (regions with different socioeconomic systems). For example, companies in developed regions (e.g., Shanghai, Beijing, and Guangdong provinces) have either more resources or larger incentives to undertake environmental and social responsibility projects than companies in less-developed regions.

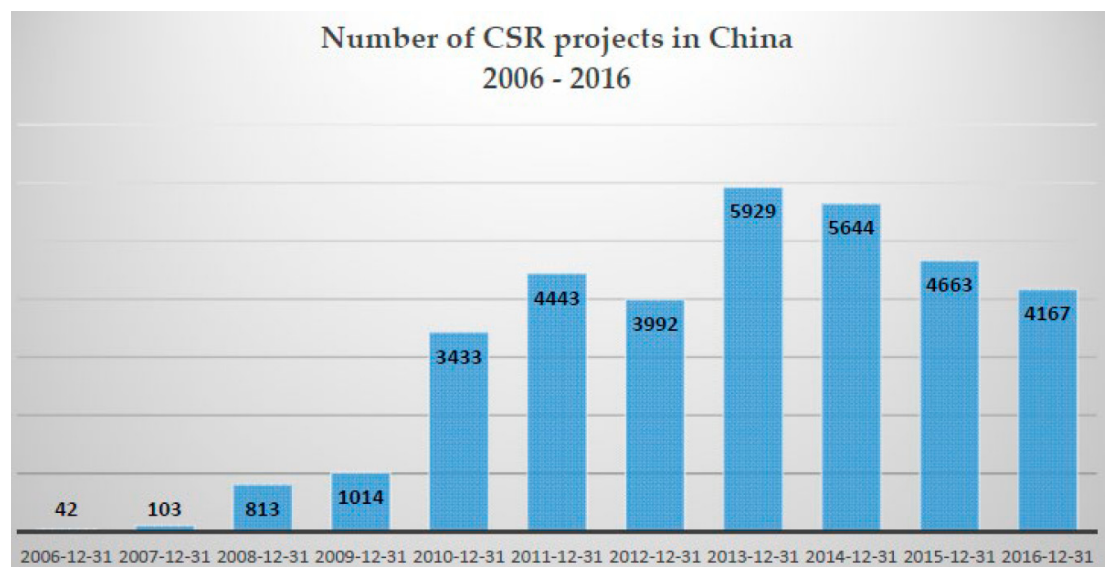


Figure 1. Number of CSR projects in China, 2006–2016. CSMAR database.

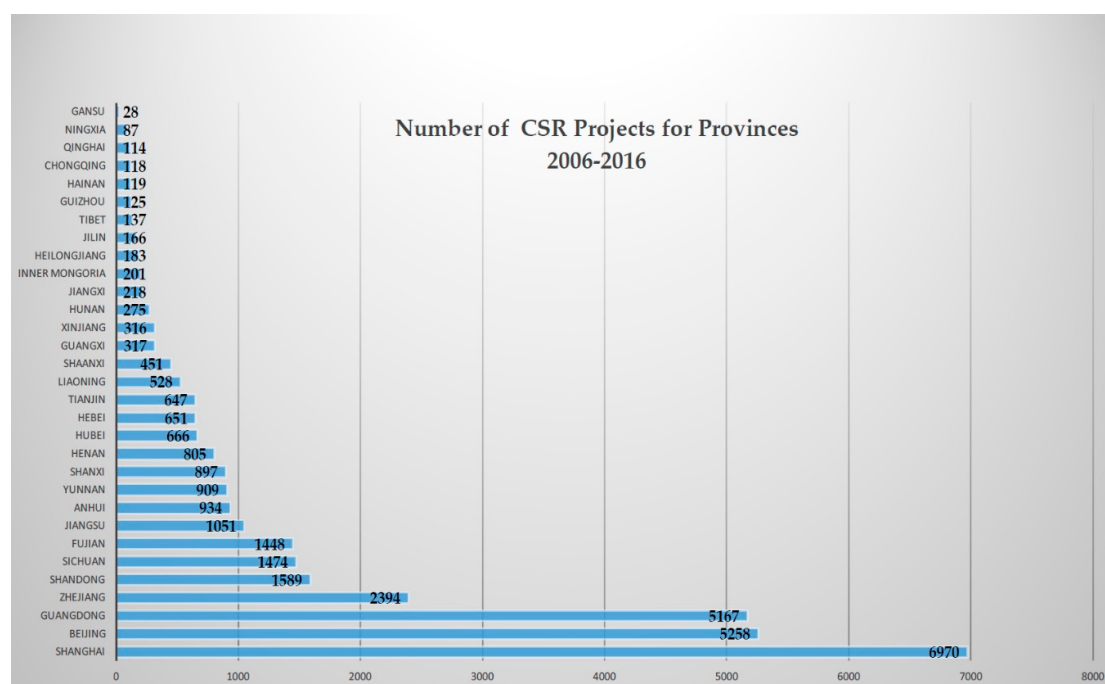


Figure 2. Number of CSR projects by province. CSMAR database.

Finally, we observed the distribution of CSR projects according to industry types for participating companies. In China all of the companies are following the industry classification standard issued by the China Securities Regulatory Commission (CSRC), the main regulator of the securities industry in China. Using the CSRC classification standard in 2012, we categorized company data into 17 industries, and then counted the projects affiliated to companies in each industry.

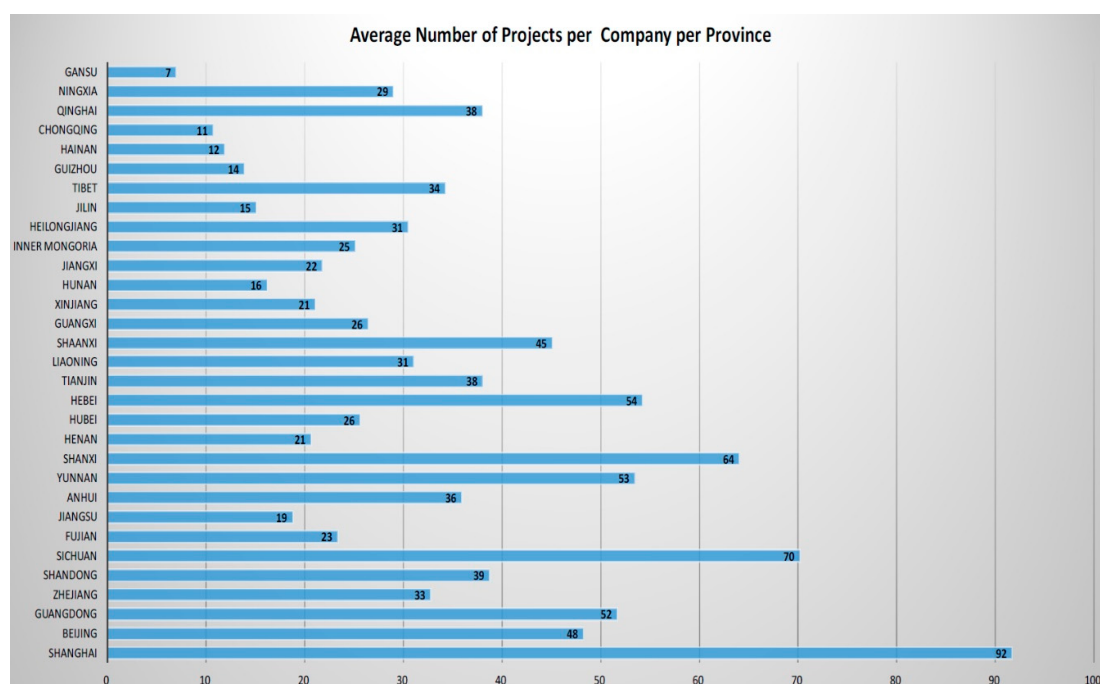


Figure 3. Average number of projects per company by province. CSMAR database.

The results indicate that project proportions differ largely across industry type. As shown in Figure 4, the top five industries with the largest numbers of projects are manufacturing (60%), followed by finance (9%), minerals (8%), energy utilities (8%), and transportation (6%). These industries occupy 91% of the entire pool. The other 12 industries occupy the remaining 9%, including construction, real estate, sales, IT & computer, public utilities, rental & leasing, agriculture, hotels & catering, culture & entertainment, research, healthcare service, and others listed as miscellaneous.

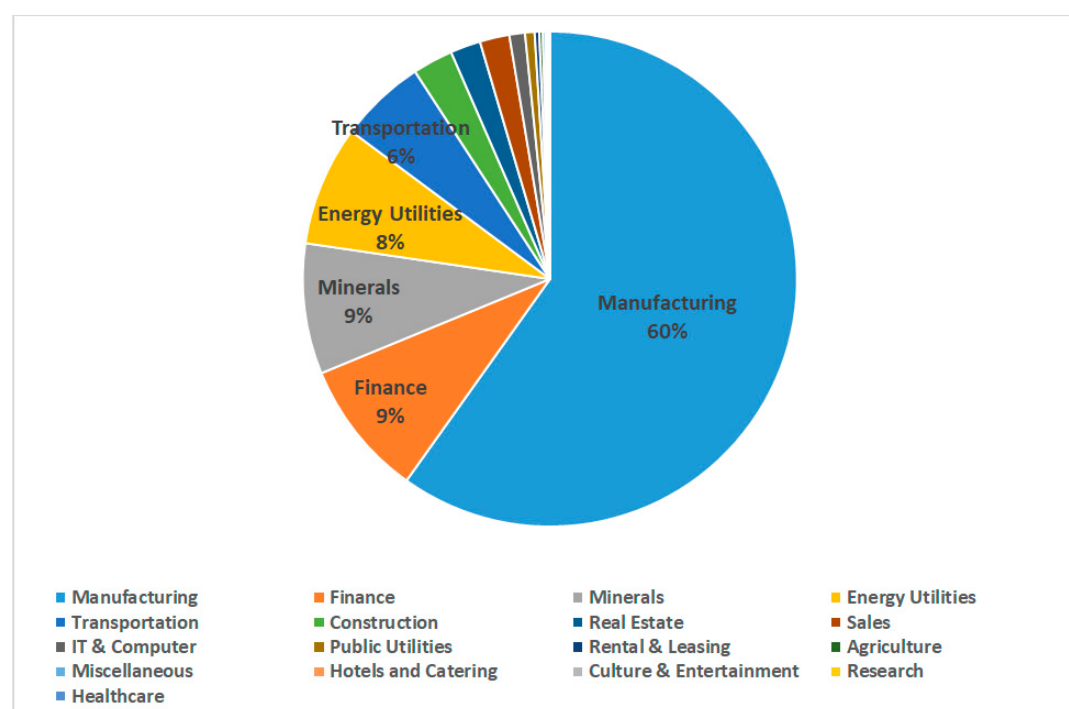


Figure 4. Proportion of CSR projects according to industry type. CSMAR database.

The concentration of CSR projects in specific industries is associated with the corporate governance policy in China. In 2010, the Chinese government alerted some industrial sectors (including steel, cement, chemical engineering, coal, and metallurgy) and classified them as heavy-pollution sectors. These sectors are mainly concentrated in the top five industries with the largest numbers of projects.

### 3.2. Context Analysis of CSR Projects

We then analyzed the types and contexts of the CSR projects. Through reading the project reports issued by companies, we identified which issues the company would address. These issues were then categorized into two main sections for environmental sustainability or social responsibility, and then the context was specified according to the main focus of the CSR project.

Through the initial assessment of the data, we excluded 3143 projects due to lack of transparency and incompleteness of the project information. Analyses of 31,100 projects indicated that companies completed 23,488 CSR projects with focus on environmental responsibility, and 8509 projects with focus on social responsibility; 897 projects had both environmental and social responsibility context. Results further indicated that CSR projects with focus on environmental sustainability mainly related to air, water, energy, and solid or hazardous material management. Projects with focus on social responsibility mainly concerned employee training, noise and pollution emission reduction in the workplace, and assessment of the industry operation impact on society and welfare.

We show the distribution of CSR projects with different focuses in Table 2. In the panel for environmental responsibility, CSR projects concern issues of energy, water, and air. In the panel for social responsibility, projects mostly have their focus on worker training, exposure to workplace emissions (e.g., noise), and implementation of other projects that were concerned with protecting society as a whole.

**Table 2.** Distribution of the CSR projects with different focuses.

| <b>Panel A. Environmental Sustainability</b> |                 |                 |               |                |               |
|----------------------------------------------|-----------------|-----------------|---------------|----------------|---------------|
|                                              | <b>Air</b>      | <b>Water</b>    | <b>Energy</b> | <b>Solid</b>   | <b>Hazard</b> |
| Number                                       | 5070            | 6753            | 10,765        | 3451           | 1349          |
| Percentage                                   | 16.30%          | 21.70%          | 34.60%        | 11.10%         | 4.30%         |
| <b>Panel B. Social Responsibility</b>        |                 |                 |               |                |               |
|                                              | <b>Training</b> | <b>Exposure</b> | <b>Labor</b>  | <b>Society</b> |               |
| Number                                       | 4286            | 651             | 892           | 3327           |               |
| Percentage                                   | 13.80%          | 2.10%           | 2.90%         | 10.70%         |               |

Figure 5 depicts the trend of CSR projects for each context between 2006 and 2016. The figure clearly shows a sharp increase in the number of environmental sustainability projects in the areas of energy, water, and air management between 2007 and 2013 (similar to Figure 1). As an interesting finding, CSR projects concerned with solid and hazardous wastes show an increase in 2015 and 2016. This increase can be attributed to the enforcement of government regulatory requirements to reduce generation of hazardous material in industrial environments.

As shown in Figure 6, social responsibility efforts increased from 2006 to 2012, then held a steady trend before declining in 2015 (in all social responsibility focused projects). The number of CSR projects focusing on employee trainings, however, showed a sharp increase from 2011 to 2013, followed by a drop in numbers in 2014.

As observed before, the location where companies operate is a key factor that influences the CSR initiatives. As a further investigation of the correlation between CSR initiatives and locations, we sorted the 31 province-level divisions by their GDPs per capita. The correlations are depicted in Figure 7. Shanghai, Beijing, and Guangdong, whose GDPs per capita are leading among Chinese provinces and cities, show a higher CSR initiative level in year 2016.

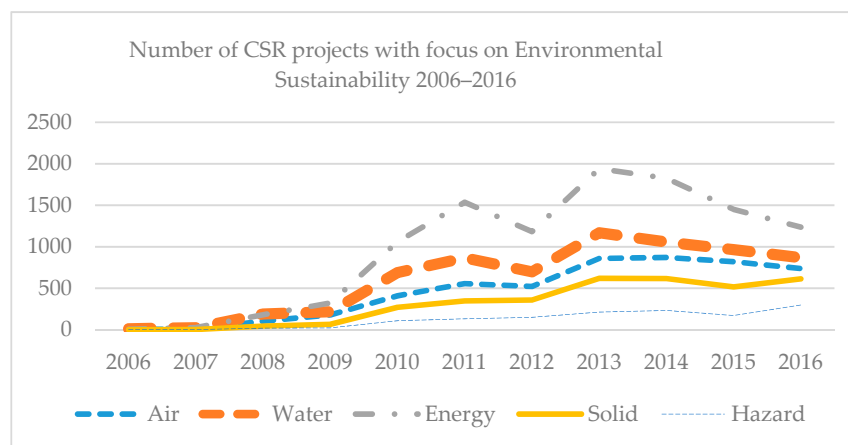


Figure 5. Number of CSR projects with focus on environmental sustainability. CSMAR database.

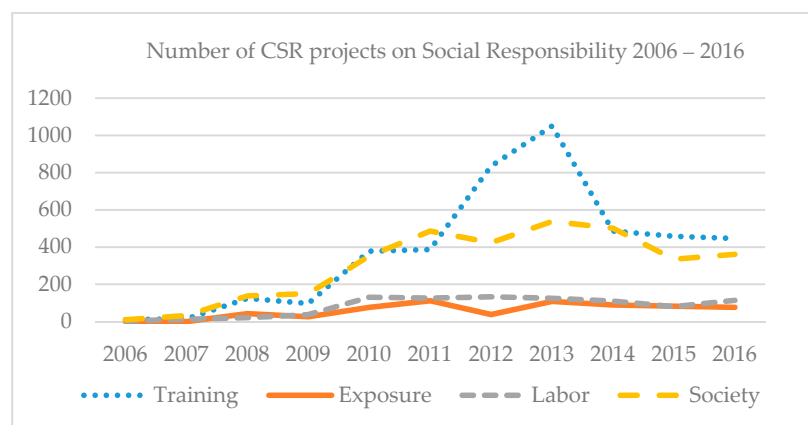


Figure 6. Number of CSR projects on social responsibility 2006–2016. CSMAR database.

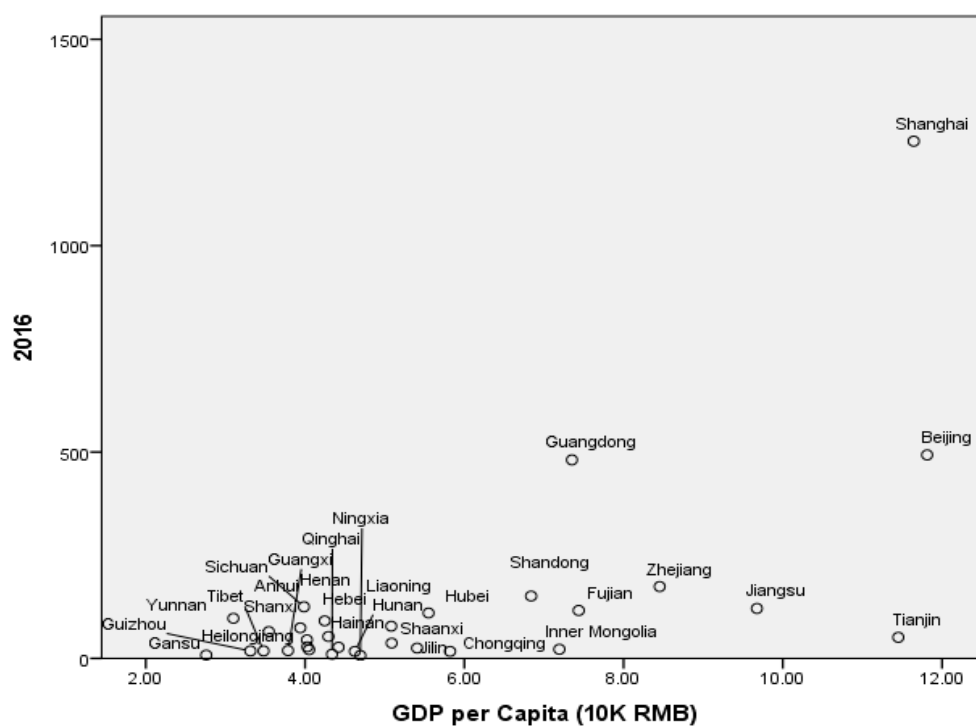


Figure 7. Correlation between CSR initiatives and provinces. (CSMAR) database.

In summary, our analyses of the CSR projects suggest a significant increase for CSR initiatives from 2006 to 2016, and a trend toward promoting sustainable development in China. Furthermore, results suggest the importance and impact of geographical location and GDPs on the success of CSR initiatives in China. Project types and numbers shown varied according to the type of company and the anticipated impact on maintaining environmental and social sustainability in China.

#### 4. CSR on Corporate Performance

In this section, we analyzed the impact of CSR on different aspects of company performance. According to [52], we assumed that the core issue for corporate governance while examining CSR initiatives is related to different motivations of the corporate owners and the equity investors (principals) and managers (agents), since investors and managers both have determinative power on company affairs—including adoption of CSR initiatives. Then, in order to take a comprehensive look at the impact of CSR, we investigated corporate performance in terms of investors and managers respectively and selected different corporate performance measures according to assumed objectives of the investors and managers, respectively. We want to examine two main hypotheses:

**Hypothesis 1.** *The revenue of investors will increase as the practice of CSR increases.*

**Hypothesis 2.** *The benefit to managers will increase as the practice of CSR increases.*

##### 4.1. Test of Hypothesis 1

By first examining the standpoint of investors (that is, the standpoint of owners and equity holders of the company), we can see how the practice of CSR affects corporate performance. To explore the impact of CSR from the investors' perspective, we selected the earnings per share (EPS) as the target measure [53]. EPS describes the monetary value of earnings per outstanding share of common stock for a company, and it is the actual gains that stockholders receive [54]. Thus, EPS is the foremost measure that is of highest concern to owners and equity investors.

We select a series of independent variables to assess their respective impact on EPS. These independent variables include the practice of CSR and other aspects of a company's basic information.

1. For each company  $i$  in year  $t$ , we count the number of CSR projects,  $NumCSR_{i,t}$ , to measure the extent of participation. A larger value of  $NumCSR_{i,t}$  indicates a greater initiative in CSR and sustainability.
2. For each company  $i$  in year  $t$ , we use  $Size_{i,t}$  to represent the total asset.
3. For each company  $i$  in year  $t$ , we use  $Revenue_{i,t}$  to present the annual revenue from main business.
4. For each company  $i$  in year  $t$ , we use  $Tax_{i,t}$  to present the effective tax rate.
5. For each company  $i$  in year  $t$ , we use  $Employment_{i,t}$  to present the number of employees.

We create the following ordinary least squares (OLS) regression model in (1) by using these independent variables. To compare the importance across the independent variables, we use standardized  $\beta$  coefficients.

$$EPS_{i,t} = \alpha + \beta_1 NumCSR_{i,t} + \beta_2 Size_{i,t} + \beta_3 Revenue_{i,t} + \beta_4 Tax_{i,t} + \beta_5 Employment_{i,t} + \varepsilon \quad (1)$$

Table 3 presents the standardized OLS coefficients for the dependent variable EPS. In the first column, we incorporate the overall companies and their practice in the regression.  $NumCSR$  displays a positive relationship to EPS by a coefficient 0.13. This coefficient is statistically significant at the 5% level. To be clear, as these regressions have been normalized, this result shows that an increase in CSR practice ( $NumCSR$ ) by one standard deviation raises the company's value (EPS) by 0.13 of its standard deviation. Compared with the other four control variables, environmental and social responsibility

has a strong impact on *EPS*. A greater initiative in CSR will enhance the enterprise value of a company. Therefore, we cannot reject Hypothesis 1.

**Table 3.** OLS estimates for corporate performance from investors' concern.

| <i>EPS</i>        | Overall | High-CSR Regions | Mid-CSR Regions | Low-CSR Regions |
|-------------------|---------|------------------|-----------------|-----------------|
| <i>NumCSR</i>     | 0.13 *  | 0.14 *           | 0.12 *          | 0.07            |
| <i>Size</i>       | 0.15 *  | 0.18 *           | −0.09           | 0.26 *          |
| <i>Revenue</i>    | 0.36 *  | 0.42 *           | 0.18 *          | 0.03            |
| <i>Tax</i>        | −0.05 * | −0.03            | −0.13 *         | −0.03           |
| <i>Employment</i> | −0.43 * | −0.50 *          | −0.08           | −0.12 *         |

Notes: \* refers to the statistical significance at 5%.

Corporate geographic dispersion plays a significant role with respect to enterprise value and profitability [55–58]. In order to investigate the potentially diverse impact of environmental and social responsibility projects across different geographic regions of China, we classify the 31 province-level divisions in China into three regions according to their aggregate numbers of projects in Figure 2. For divisions with over 1000 environmental and social responsibility specific-related announcements, we define them as high-CSR regions; for divisions with CSR-related announcements between 500 and 1000, we define them as mid-CSR regions; for divisions with fewer than 500 CSR-related announcements, we define them as low-CSR regions. The distribution map of the three regions is presented in Figure 8.



**Figure 8.** Distribution map of the three regions of CSR initiative.

As an extension, we examine a series of sub-hypotheses affiliated with the main hypotheses.

**Hypothesis 1.1.** *In the regions with higher CSR disclosure, the revenue of investors will increase as the practice of CSR increases.*

**Hypothesis 1.2.** *In the regions with medium CSR disclosure, the revenue of investors will increase as the practice of CSR increases.*

**Hypothesis 1.3.** *In the regions with lower CSR disclosure, the revenue of investors will increase as the practice of CSR increases.*

We use model (1) for the three regions respectively, and show the standardized OLS coefficients in Table 3. In the high-CSR regions, *NumCSR* displays a positive impact on *EPS* by a coefficient 0.14. Therefore, we cannot reject Hypothesis 1.1. In the mid-CSR regions, this impact decreases to a lower coefficient 0.12. Therefore, we cannot reject Hypothesis 1.2. When we look at the low-CSR regions, the impact of *NumCSR* drops down to 0.07 and is no longer statistically significant at the 5% level. Therefore, we reject Hypothesis 1.3.

Environmental and social responsibility specific CSRs and their impact on the company's value differ in the three regions. There is an obvious decreasing trend in the impact of CSR on the company's value from the high-CSR regions to the low-CSR regions. A greater initiative in CSR will enhance the company's value at a larger extent for companies located in the high-CSR regions. This finding is reasonable. As shown in Figure 8, the high-CSR regions involve the highly-developed provinces and cities in China, such as Beijing, Shanghai, and those provinces at the south and east coast of China. The businesses in this region know more about CSR and its importance, and thus have a greater initiative in CSR. By contrast, the mid-CSR regions involve provinces and cities in the middle of China (e.g., Hebei and Tianjin), and these provinces are still developing and pursuing the development level of the high-CSR regions. The business environment in the mid-CSR regions is close to that in high-CSR regions, so the impacts of CSR in mid-CSR and high-CSR regions are close. The low-CSR region involves those developing provinces in northeastern or western China, where the business development is still at an early stage, and the modern business environment is still under construction. Therefore, companies in the low-CSR region are less concerned about CSR, and the insignificance of CSR impact is shown in Table 3.

In summary, we explore the impact of CSR on corporate performance. In order to assess that impact from the investors' perspectives, we select *EPS*, the indicator that investors are most concerned about, to measure the company's value movement. We find that a company will gain a higher *EPS* when it engages in CSR with more practices. We then classify the studied companies into three regions with different levels of CSR initiative. Our results suggest that in the regions with more CSR practices, companies will benefit more from their CSR practices with a higher reward of investment earnings. According to these results, we cannot reject Hypothesis 1.

#### 4.2. Test of Hypothesis 2

In this section, we take the standpoint of managers to see how the practice of CSR affects the corporate performance. We select the net cash flow (NCF) as the target. According to [59], NCF refers to the difference between a company's cash inflows and outflows in a given period, and measures a company's cash balance in terms of financial accounting. NCF is widely regarded and used by managers, accountants, and auditors because it is an essential measure to understand the changes in a company's cash balance as detailed on its cash flow statement, so as to ensure this company is profitable and has sufficient capital on hand to operate. A higher NCF implies a healthier financial statement of a company. Thus, we choose NCF as the target measure for this analysis.

The operation of a company is related to diverse aspects of production and consumption. To managers, it is critical to know the exact aspects of environmental and social responsibility specific CSR that their companies engage in. In order to explore the concrete impacts of projects on different aspects of the corporate operation, we categorize these projects into five components (*CP1* to *CP5*) according to the 1998 principles of environmental sustainability:

CP1: environmentally sound products and packaging

CP2: non-polluting production  
 CP3: production energy efficiency  
 CP4: safe and healthy work environments  
 CP5: waste reduction.

In each component, we count the number of projects for company  $i$  in year  $t$ , as the measure of the participation in specific aspects of environmental and social responsibility specific CSRs. We use these five components as independent variables in the following OLS model.

$$NCF_{i,t} = \alpha + \beta_1 CP1_{i,t} + \beta_2 CP2_{i,t} + \beta_3 CP3_{i,t} + \beta_4 CP4_{i,t} + \beta_5 CP5_{i,t} + \varepsilon \quad (2)$$

We first incorporate the overall companies. Table 4 presents the standardized OLS coefficients for  $NCF$ . Not every component of CSR is significantly related to the dependent variable. Among the five components,  $CP3$  has the largest positive efficient (0.27), indicating that the upgrade of energy efficiency in the production will raise the corporate performance with a greater  $NCF$ , which will be welcomed by the management. It is reasonable because companies may have a cost saving through enhancing the energy efficiency. Furthermore,  $CP2$  also has a significantly positive efficient (0.10), and suggests that a company's  $NCF$  will increase when the company achieves non-polluting production. The reduction of pollution will also have a cost saving. These results are consistent with the statement from the GB/T20106 national rule. Besides,  $CP5$  displays a negative relationship to  $NCF$ . The increase in waste reduction practice by one standard deviation will reduce the  $NCF$  by 0.22 of its standard deviation. This result suggests that many Chinese companies still stay at the stage of extensive growth regardless of resource waste. Finally,  $CP1$  and  $CP4$  are not statistically significant in Table 4, suggesting that environmentally sound production and work condition are not concerned by corporate managers as incentives for operation.

**Table 4.** OLS estimates for corporate performance from managers' concern.

| <i>NCF</i> | <b>Overall</b> |
|------------|----------------|
| <i>CP1</i> | −0.01          |
| <i>CP2</i> | 0.10 *         |
| <i>CP3</i> | 0.27 *         |
| <i>CP4</i> | −0.02          |
| <i>CP5</i> | −0.22 *        |

Notes: \* refers to the statistical significance at 5%.

As shown earlier in Figure 4 the extent of CSR varies across industries. Thus, the components of CSR must have different impacts in different industries. We next examine the impacts of every component of CP in different industries. Following Figure 4, we select the five target industries with highest proportion of projects for selected class of industry: manufactures, finance, minerals, energy utilities, and transportations. As we did in Figure 4, we classify companies into the five selected industries according to the 2012 CSRC industry classification standard, and then sort the companies' projects into each target industry.

Table 5 presents the standardized OLS coefficients for  $NCF$  in the selected industries. The results vary across industries. Like Table 3, not every component of CSR is significantly related to the dependent variable. First, in the manufactures industry,  $CP3$  has the largest positive efficient (0.20) among the five components, indicating that the upgrade of energy efficiency in the production will raise the  $NCF$  of companies in the manufactures industry. However,  $CP1$  displays a negative impact (−0.18). It suggests that environmentally sound add-ins to production are not actively and innately of concern in the manufacturer industry. These results are in line with the developing stage of the manufacturing

industry in China. From the cost–benefit perspective, managers treat revenue maximization and energy saving as the foremost target of production. Their initiative of environment protection diminishes when it contradicts profitability. The other CSR components are not statistically significant. In summary, in the manufacturing industry, managers are concerned more about energy efficiency in the production because it promotes the health of the company’s financial statement, whereas environmentally sound practices in production and packaging may incur a higher manufacturing cost.

**Table 5.** OLS estimates for industrial corporate performance from managers’ concern.

| <i>NCF</i> | <b>Manufactures</b> | <b>Finance</b> | <b>Minerals</b> | <b>Energy Utilities</b> | <b>Transportation</b> | <b>Other</b> |
|------------|---------------------|----------------|-----------------|-------------------------|-----------------------|--------------|
| <i>CP1</i> | −0.18 *             | 0.04           | 0.18 *          | −0.11                   | −0.19                 | −0.09        |
| <i>CP2</i> | 0.04                | −0.07          | −0.10           | −0.08                   | 0.00                  | −0.03        |
| <i>CP3</i> | 0.20 *              | 0.40 *         | 0.17            | 0.82 *                  | 0.64 *                | 0.58         |
| <i>CP4</i> | 0.02                | 0.13           | 0.11            | −0.11                   | −0.08                 | 0.01         |
| <i>CP5</i> | 0.07                | −0.14          | −0.09           | −0.49 *                 | −0.10                 | −0.45        |

Notes: \* refers to the statistical significance at 5%.

We then look at the finance industry. As shown in the second column of Table 5, only *CP3* is statistically significant to the dependent variable. This result is reasonable. As a service industry, finance is not closely relevant to conditions such as environmental protection, pollution, safety of work environment, or waste discharge reduction. The most potentially relevant CSR actions in financial industries are improvement of energy efficiency. Like in the manufacturing industry, *CP3* has a positive impact (0.40) in the financial industry. The increase of *CP3* by one standard deviation raises the *NCF* by 40% of its standard deviation. In summary, our results state that the financial service industry is sensitive to energy efficiency.

Next, we look at the mineral industry. As shown in the third column of Table 4, the dominant and statistically significant environmental and social responsibility component is *CP1*. It confirms the concurrent truth in the mineral industry of China as described by other studies and interviews [60]. Companies in the mineral industry are more likely to be motivated to adopt environmentally sound measures in their production since this adoption can enhance the social image of the company. Moreover, the Ministry of Ecology and Environment of China (MEE) is enforcing the CSR evaluation on environmentally sound production. Qualified companies receive rewards such as tax deductions or eligibility to go public. Thus, managers in the mineral industry have higher motivations to adopt environmentally sound production and consequently receive benefits on their operational cash flows.

Fourth, in the energy utilities industry, the dominant impact is from component *CP3*. The upgrade of production energy efficiency will bring a significantly high impact (0.82) on companies’ *NCF*. Such a finding is reasonable in the energy utilities industry. For example, [61] finds that in the countries of the Organization for Economic Co-operation and Development (OECD), innovations on energy CSR are often associated with the healthy financial cash flow of a company. Our results are consistent with theirs. Another finding is that *CP5* also has a significant but negative effect on *NCF*. This is highly related to the current status of the Chinese energy utilities industry. In 2014, the National Energy Administration of China (NEA) published a plan for air pollution prevention in the energy industry, as a reaction to the increasing discharge of waste from the energy utilities industry. This official document pointed out that the energy industry was still consuming a great amount of coal for the generation of power. Two-thirds of electricity was generated by using coal with an old-fashioned technology. Therefore, the initiative of waste reduction must have an inverse effect to companies’ finance in a short period.

Similar to the energy industry, in the transportation industry, *CP3* also has the dominant impact. The transportation industry is different from the other industries that generate waste and pollution. The main target for transportation is cost savings and efficiency improvement. Therefore, the

adoption of techniques about energy efficiency counts for more than the other CSR components to the transportation industry.

In summary, we examine the overall group of companies and their CSR disclosures at first, and then examine each across industry. In both cases, we find evidence that aspects of CSR with dominant powers improve the financial health of one company. Therefore, Hypothesis 2 cannot be rejected.

## 5. Conclusions

In response to the global trend of environmental protection and social responsibility, more and more companies have adopted relevant actions. These projects are commonly identified as CSR projects and are widely considered an essential part of corporate environmental responsibility for sustainable production. From previous research, there is still no consensus on the relationship between practices and business performance.

This paper contributes to the body of knowledge in the areas specific to understanding parameters controlling success of CSR projects particularly in developing economies. First, we capture a comprehensive graph of the environmental and social responsibility projects in China, the largest emerging economy in the world between 2006 and 2016. Analysis considers data projected for all the province-level divisions. Second, we capture all projects released by all companies in China, including over 34,000 projects released by 839 companies. This is the first study on company-level records. Third, we investigate and compare impacts of the projects on company performance from the perspective of investors and managers; we assume that the core issues for corporate governance (including CSR initiatives) is controlled by different motivations of corporate owners, equity investors (principals), and managers (agents) who have determinative power on various company affairs including adoption of CSR initiatives. Our contribution is extended by suggesting an evolutionary path of CSR theory and practices. Results highlight the effect of state of economies on the level of acceptance and configuration of CSR projects, suggesting that companies in China are slightly shifting focus on their CSR impact from macro-social effects to organizational-level effects on the profit, and less on ethics-oriented practices. The observed pattern of performance-oriented, business-focused CSR design and practice may overcome those that focus on ethics or that offer a broader societal perspective [62–64].

Explicitly, we indicate that, although companies in China have a growing initiative in their production and services, there is a distinct impact of the GDP per capita on the number of projects that companies undertake. In addition, we observe an uneven dispersion of practices across industries. Both findings are in agreement with the most recent published study in this field [40,41,51]. In the empirical analyses, we find that from the investors' perspective, a company will gain a higher revenue when it engages in CSR with more practices, as shown in recent studies [37–39,41,42,44]. We also find evidence that the CSR initiatives could improve the financial health of a company and consequently facilitate the manager's operation. These results apply across industries [22,27,28,32,34,35].

Cumulatively results reveal that: (1) companies in China have a growing initiative to include environmental and social responsibility in their production and services; (2) the type and characteristics of the reported projects were distinctive in regions and specific to different economic conditions; (3) regions with lower economic conditions are not yet motivated to implement CSR projects, unlike regions with higher economic conditions; (4) different industries have different strategies and format for CSR disclosure, for example, manufactures announced the largest number of CSR projects among other industries. In the empirical analyses, we find that from investors' perspective, a company will gain a higher revenue when it engages in CSR with more practices. We also find evidence that CSR improves the financial health of one company and consequently facilitate manager's operation efficiencies. This result applies across industries. In conclusion, we show that CSR is beneficial to one company's performance, and this finding will make companies promote sustainability. Our results enrich the investigations focusing on understanding impact of CSR project types and economic conditions and promoting sustainable development, particularly in developing countries.

Data selected in this study included announced CSR projects that were verified by China Securities Regulatory Commission (CSRC) standards, which eliminated the possibility of companies reporting projects that were only aimed at either reducing social pressures and limiting criticism from society in general and external stakeholders in particular, or serving as promotional and public relations ploys. Both the data and the methods of analysis were carefully selected using reputable sources of information and academically verified analytical tools. Analysis specifically targeted providing a deeper understanding of how companies' CSR initiatives have evolved, what their goals have been, and what actions were situated in the three different regions in China. Modeling and contextual analysis highlighted the need for expansion in 'social' dimensions of CSR initiatives while addressing protection of environmental systems and mapping of trends. The types and focus of industry-specific CSR projects suggested possibilities for customization of the CSR projects according to industry type and macroeconomic system they operate in. We are optimistic that our findings can be instrumental in educating and encouraging policy makers, investors, and companies of any type to learn more about the science of sustainability and importance of designing CSR projects that can promote sustainable economic development.

Limitation in this study could be associated with (1) not taking into account the impact of government policies and programs that emerged between 2006–2016, which aimed to promote sustainability in companies operating at both national and regional levels; and (2) considering impact of management culture and leadership positions on the importance of pursuing sustainability while identifying critical areas of operation that are in need of consideration and inclusion in CSR design and development.

In summary, we conclude that undertaking CSR projects benefits a company's performance and the sustainability of economic development in China. The finding of this study is valuable and meaningful for companies that are considering the adoption of environmental and social-specific CSR projects and their stakeholders and managers who aim to promote sustainability especially in developing countries.

**Author Contributions:** Conceptualization, K.L.; Data curation, K.L.; Formal analysis, K.L. and N.R.K.; Funding acquisition, K.L.; Investigation, K.L.; Methodology, K.L.; Project administration, N.R.K.; Supervision, N.R.K.; Validation, W.C.; Visualization, N.R.K. and W.C.; Writing—original draft, K.L.; Writing—review and editing, K.L., N.R.K., and W.C.

**Funding:** The authors gratefully acknowledge the support from National Natural Science Foundation of China (grant no. 71803012), the Beijing Talents Fund of China (grant no. 2016000020124G051), and the Fundamental Research Funds for the Central Universities of China, Beijing Normal University, Beijing, China.

**Acknowledgments:** The authors thank Tongyue Li, for valuable research assistance.

**Conflicts of Interest:** the authors declare no conflict of interest.

## References

1. Hamann, R. Mining companies' role in sustainable development: The 'why' and 'how' of corporate social responsibility from a business perspective. *Dev. S. Afr.* **2003**, *20*, 237–254. [[CrossRef](#)]
2. Rasche, A.; Morsing, M.; Moon, J. The changing role of business in global society: CSR and beyond. In *Corporate Social Responsibility: Strategy, Communication and Governance*; Cambridge University Press: Cambridge, UK, 2017; pp. 1–28.
3. Elkington, J. Towards the sustainable corporation: Win-win-win business strategies for sustainable development. *Calif. Manag. Rev.* **1994**, *36*, 90–100. [[CrossRef](#)]
4. Laszlo, C.; Cescau, P. *Sustainable Value: How the World's Leading Companies are Doing Well by Doing Good*; Routledge: Abingdon, UK, 2017.
5. Thorlakson, T.; de Zegher, J.F.; Lambin, E.F. Companies' contribution to sustainability through global supply chains. *Proc. Natl. Acad. Sci. USA* **2018**, *115*, 2072–2077. [[CrossRef](#)] [[PubMed](#)]
6. Ritala, P.; Huotari, P.; Bocken, N.; Albareda, L.; Puumalainen, K. Sustainable business model adoption among S&P 500 firms: A longitudinal content analysis study. *J. Clean. Prod.* **2018**, *170*, 216–226.

7. Lin, L.W. Corporate social responsibility in China: Window dressing or structural change. *Berkeley J. Int. Law* **2010**, *28*, 64.
8. Gray, R.; Kouhy, R.; Lavers, S. Corporate social and environmental projecting: A review of the literature and a longitudinal study of UK disclosure. *Account. Audit. Account. J.* **1995**, *8*, 47–77. [[CrossRef](#)]
9. Global Projecting Initiative (GRI). *Sustainability Projecting Guidelines*; GRI: Amsterdam, The Netherlands, 2011.
10. Qiu, Y.; Shaukat, A.; Tharyan, R. Environmental and social disclosures: Link with corporate financial performance. *Br. Account. Rev.* **2016**, *48*, 102–116. [[CrossRef](#)]
11. Klynveld Peat Marwick Goerdeler (KPMG). *The KPMG Survey of Corporate Social Responsibility Reporting*; KPMG: London, UK, 2011; Available online: <https://www.kpmg.de/docs/Survey-corporate-responsibility-reporting-2011.pdf> (accessed on 7 January 2019).
12. Van Marrewijk, M. Concepts and definitions of CSR and corporate sustainability: Between agency and communion. *J. Bus. Ethics* **2003**, *44*, 95–105. [[CrossRef](#)]
13. O’Riordan, L.; Fairbrass, J. Corporate social responsibility (CSR): Models and theories in stakeholder dialogue. *J. Bus. Ethics* **2008**, *83*, 745–758. [[CrossRef](#)]
14. Tang, Y.; Ma, Y.; Wong, C.W.; Miao, X. Evolution of government policies on guiding corporate social responsibility in China. *Sustainability* **2018**, *10*, 741. [[CrossRef](#)]
15. Babiak, K.; Trendafilova, S. CSR and environmental responsibility: Motives and pressures to adopt green management practices. *Corp. Soc. Responsib. Environ. Manag.* **2011**, *18*, 11–24. [[CrossRef](#)]
16. Hens, L.; Block, C.; Cabello-Eras, J.J.; Sagastume-Gutierrez, A.; Garcia-Lorenzo, D.; Chamorro, C.; Vandecasteele, C. On the evolution of “Cleaner Production” as a concept and a practice. *J. Clean. Prod.* **2018**, *172*, 3323–3333. [[CrossRef](#)]
17. Fresner, J. Cleaner production as a means for effective environmental management. *J. Clean. Prod.* **1998**, *6*, 171–179. [[CrossRef](#)]
18. Yüksel, H. An empirical evaluation of cleaner production practices in Turkey. *J. Clean. Prod.* **2008**, *16*, S50–S57. [[CrossRef](#)]
19. Tseng, M.L.; Lin, Y.H.; Chiu, A.S.F.; Liao, J.C.H. Using FANP approach on selection of competitive priorities based on cleaner production implementation: A case study in PCB manufacturer, Taiwan. *Clean Technol. Environ. Policy* **2008**, *10*, 17–29. [[CrossRef](#)]
20. Tseng, M.L.; Lin, Y.H.; Chiu, A.S.F. Fuzzy AHP-based study of cleaner production implementation in Taiwan PWB manufacturer. *J. Clean. Prod.* **2009**, *17*, 1249–1256. [[CrossRef](#)]
21. Pimenta, H.C.D.; Gouvinhas, R.P. Cleaner Production as a Corporate Sustainability Tool: An Exploratory Discussion. 2011. Available online: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.663.948&rep=rep1&type=pdf> (accessed on 9 January 2019).
22. Zeng, S.X.; Meng, X.H.; Yin, H.T.; Tam, C.M.; Sun, L. Impact of cleaner production on business performance. *J. Clean. Prod.* **2010**, *18*, 975–983. [[CrossRef](#)]
23. Deegan, C.; Gordon, B. A study of the environmental disclosure practices of Australian corporations. *Account. Bus. Res.* **1996**, *26*, 187–199. [[CrossRef](#)]
24. Clarkson, P.M.; Li, Y.; Richardson, G.D.; Vasvari, F.P. Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Account. Organ. Soc.* **2008**, *33*, 303–327. [[CrossRef](#)]
25. Clarkson, P.M.; Li, Y.; Richardson, G.D.; Vasvari, F.P. Does it really pay to be green? Determinants and consequences of proactive environmental strategies. *J. Account. Public Policy* **2011**, *30*, 122–144. [[CrossRef](#)]
26. Clarkson, P.M.; Fang, X.; Li, Y.; Richardson, G. The relevance of environmental disclosures: Are such disclosures incrementally informative? *J. Account. Public Policy* **2013**, *32*, 410–431. [[CrossRef](#)]
27. López-Gamero, M.D.; Molina-Azorín, J.F.; Claver-Cortés, E. The whole relationship between environmental variables and firm performance: Competitive advantage and firm resources as mediator variables. *J. Environ. Manag.* **2009**, *90*, 3110–3121. [[CrossRef](#)] [[PubMed](#)]
28. Molina-Azorín, J.F.; Claver-Cortés, E.; Pereira-Moliner, J.; Tari, J.J. Environmental practices and firm performance: An empirical analysis in the Spanish hotel industry. *J. Clean. Prod.* **2009**, *17*, 516–524. [[CrossRef](#)]

29. Wagner, M. How to reconcile environmental and economic performance to improve corporate sustainability: Corporate environmental strategies in European paper industry. *J. Environ. Manag.* **2005**, *76*, 105–118. [[CrossRef](#)] [[PubMed](#)]
30. Sarkis, J.; Dijkshoorn, J. Relationships between solid waste management performance and environmental practice adoption in Welsh small and medium-sized enterprises (SMEs). *Int. J. Prod. Res.* **2007**, *45*, 4989–5015. [[CrossRef](#)]
31. Aupperle, K.E.; Carroll, A.B.; Hatfield, J.D. An empirical examination of the relationship between corporate social responsibility and profitability. *Acad. Manag. J.* **1985**, *28*, 446–463.
32. McGuire, J.B.; Sundgren, A.; Schneeweis, T. Corporate social responsibility and firm financial performance. *Acad. Manag. J.* **1988**, *31*, 854–872.
33. McWilliams, A.; Siegel, D. Corporate social responsibility: A theory of the firm perspective. *Acad. Manag. Rev.* **2001**, *26*, 117–127. [[CrossRef](#)]
34. Barnett, M.L. Stakeholder influence capacity and the variability of financial returns to corporate social responsibility. *Acad. Manag. Rev.* **2007**, *32*, 794–816. [[CrossRef](#)]
35. Tixier, M. Will sustainable management be a clear differentiator for tour operators? *Anatolia* **2009**, *20*, 461–466. [[CrossRef](#)]
36. Tziner, A. Corporative social responsibility (CSR) activities in the workplace: A comment on Aguinis and Glavas (2013). *Revista de Psicología del Trabajo y de las Organizaciones* **2013**, *29*, 91–93. [[CrossRef](#)]
37. Cheng, B.; Ioannou, I.; Serafeim, G. Corporate social responsibility and access to finance. *Strateg. Manag. J.* **2014**, *35*, 1–23. [[CrossRef](#)]
38. Warshawsky, D.N. Food waste, sustainability, and the corporate sector: Case study of a US food company. *Geogr. J.* **2016**, *182*, 384–394. [[CrossRef](#)]
39. Yuan, X. Correction of Corporation Value Assessment Model Based on Corporate Social Responsibility. *Agric. Sci. Technol.* **2017**, *18*, 736–739.
40. Hategan, C.D.; Sirghi, N.; Curea-Pitorac, R.I.; Hategan, V.P. Doing well or doing good: The relationship between corporate social responsibility and profit in Romanian companies. *Sustainability* **2018**, *10*, 1041. [[CrossRef](#)]
41. Hawn, O.; Chatterji, A.K.; Mitchell, W. Do investors actually value sustainability? New evidence from investor reactions to the Dow Jones Sustainability Index (DJSI). *Strateg. Manag. J.* **2018**, *39*, 949–976. [[CrossRef](#)]
42. Platonova, E.; Asutay, M.; Dixon, R.; Mohammad, S. The impact of corporate social responsibility disclosure on financial performance: Evidence from the GCC Islamic banking sector. *J. Bus. Ethics* **2018**, *151*, 451–471. [[CrossRef](#)]
43. Halme, M.; Rintamäki, J.; Knudsen, J.S.; Lankoski, L.; Kuisma, M. When Is There a Sustainability Case for CSR? Pathways to Environmental and Social Performance Improvements. *Bus. Soc.* **2018**. [[CrossRef](#)]
44. Presley, A.; Presley, T.; Blum, M. Sustainability and company attractiveness: A study of American college students entering the job market. *Sustain. Account. Manag. Policy J.* **2018**, *9*, 470–489. [[CrossRef](#)]
45. Dragomir, V.D. How do we measure corporate environmental performance? A critical review. *J. Clean. Prod.* **2018**, *196*, 1124–1157. [[CrossRef](#)]
46. Chen, Y.C.; Hung, M.; Wang, Y. The effect of mandatory CSR disclosure on firm profitability and social externalities: Evidence from China. *J. Account. Econ.* **2018**, *65*, 169–190. [[CrossRef](#)]
47. Feng, Y.; Chen, H.H.; Tang, J. The Impacts of Social Responsibility and Ownership Structure on Sustainable Financial Development of China's Energy Industry. *Sustainability* **2018**, *10*, 301. [[CrossRef](#)]
48. Anser, M.K.; Zhang, Z.; Kanwal, L. Moderating effect of innovation on corporate social responsibility and firm performance in realm of sustainable development. *Corp. Soc. Responsib. Environ. Manag.* **2018**, *25*, 799–806. [[CrossRef](#)]
49. Li, K. Reaction to News in the Chinese Stock Market: A Study on Xiong'an New Area Strategy. *J. Behav. Exp. Financ.* **2018**, *19*, 36–38. [[CrossRef](#)]
50. Yu, A.; Gallagher, T.; Zhao, C.; Zhao, Y. Selecting Evaluation Indices for Cleaner Production of Plantation Logging in Southern China with Fuzzy Clustering Methods. *Croat. J. Forest Eng.* **2016**, *37*, 71–87.
51. Khalili, N.R.; Cheng, W.; McWilliams, A. A methodological approach for the design of sustainability initiatives: In pursuit of sustainable transition in China. *Sustain. Sci.* **2017**, *12*, 933–956. [[CrossRef](#)]

52. Jensen, M.C.; Meckling, W.H. Theory of the firm: Managerial behavior, agency costs and ownership structure. *J. Financ. Econ.* **1976**, *3*, 305–360. [\[CrossRef\]](#)
53. Mohammadi, M.A.D.; Mardani, A.; Khan, A.; Azli, M.N.; Streimikiene, D. Corporate sustainability disclosure and market valuation in a Middle Eastern Nation: Evidence from listed firms on the Tehran Stock Exchange: Sensitive industries versus non-sensitive industries. *Economic Research-Ekonomska Istraživanja* **2018**, *31*, 1488–1511. [\[CrossRef\]](#)
54. Jorion, P. *Financial Risk Manager Handbook*, 4th ed.; John Wiley & Sons: Hoboken NJ, USA, 2007; ISBN 978-0470904015.
55. Gao, W.; Ng, L.; Wang, Q. Does geographic dispersion affect firm valuation? *J. Corp. Finan.* **2008**, *14*, 674–687. [\[CrossRef\]](#)
56. Almazan, A.; Motta, A.D.; Titman, S.; Uysal, V. Financial structure, acquisition opportunities, and firm locations. *J. Finan.* **2010**, *65*, 529–563. [\[CrossRef\]](#)
57. Garcia, D.; Norli, Ø. Geographic dispersion and stock return. *J. Financ. Econ.* **2012**, *106*, 547–565. [\[CrossRef\]](#)
58. Shi, G.; Sun, J.; Luo, R. Geographic dispersion and earnings management. *J. Account. Public Policy* **2015**, *34*, 490–508. [\[CrossRef\]](#)
59. Brealey, R.A.; Myers, S.C.; Allen, F. *Principles of Corporate Finance*, 12th ed.; 2012; ISBN 978-1259004650. Available online: [https://s3.amazonaws.com/academia.edu.documents/31182842/DE001125555EA654126BCC12572DF00423B78.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1547172506&Signature=AyPzFn87mDigb7okd5e2YuYLVZw%3D&response-content-disposition=inline%3B%20filename%3DCorporate\\_finance.pdf](https://s3.amazonaws.com/academia.edu.documents/31182842/DE001125555EA654126BCC12572DF00423B78.pdf?AWSAccessKeyId=AKIAIWOWYYGZ2Y53UL3A&Expires=1547172506&Signature=AyPzFn87mDigb7okd5e2YuYLVZw%3D&response-content-disposition=inline%3B%20filename%3DCorporate_finance.pdf) (accessed on 11 January 2019).
60. Hua, M.; A Personal Account of Life inside a Chinese Mining Company. China Dialogue. 2013. Available online: <https://www.chinadialogue.net/article/show/single/en/6334-A-personal-account-of-life-inside-a-Chinese-mining-company> (accessed on 7 January 2019).
61. Al Mamun, M.; Sohag, K.; Shahbaz, M.; Hammoudeh, S. Financial markets, innovations and cleaner energy production in OECD countries. *Energy Econ.* **2018**, *72*, 236–254. [\[CrossRef\]](#)
62. Lee, M.D.P. A review of the theories of corporate social responsibility: Its evolutionary path and the road ahead. *Int. J. Manag. Rev.* **2008**, *10*, 53–73. [\[CrossRef\]](#)
63. Gatti, L.; Vishwanath, B.; Seele, P.; Cottier, B. Are we moving beyond voluntary CSR? Exploring theoretical and managerial implications of mandatory CSR resulting from the New Indian Companies Act. *J. Bus. Ethics* **2018**, 1–12. Available online: <https://doi.org/10.1007/s10551-018-3783-8> (accessed on 11 January 2019). [\[CrossRef\]](#)
64. Chuang, S.P.; Huang, S.J. The effect of environmental corporate social responsibility on environmental performance and business competitiveness: The mediation of green information technology capital. *J. Bus. Ethics* **2018**, *150*, 991–1009. [\[CrossRef\]](#)

