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Corporate social responsibility budgeting and spending during COVID–19 in Oman: A humanitarian response to the pandemic

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ABSTRACT

COVID–19 is causing economic panic among people, governments, and businesses, requiring greater corporate social responsibility (CSR). Using a sample of Omani-listed firms, this study shows that CSR budgeting and spending have increased considerably during the pandemic. It also shows that CSR budgeting is positively affected by the increase in COVID–19 deaths. CSR spending increases with the number of COVID–19 confirmed and fatal cases. These findings suggest that firms resort to CSR to reduce the negative consequences of the pandemic.

1. Introduction

Corporate social responsibility (CSR) is a major policy for businesses to build a solid relationship with their stakeholders and ensure survivability (Bruna and Lahouel, 2021; Bruna and Nicolo, 2020). The payoff of this policy is more noticeable during crises where firms with established CSR practices receive support from their stakeholders and attain more privileges than their counterparts (Bae et al., 2021; Boubaker et al., 2020; Garel and Petit-Romec, 2021; Lins et al., 2017; Qiu et al., 2021). However, during crises, stakeholders expect firms to initiate CSR activities that are genuinely congruent with their demands (Bae et al., 2021). Thus, CSR is defined as activities carried out by firms that are beneficial to some segment of society at a given point in time according to their economic, legal, ethical, and discretionary expectations (Carroll, 2021). COVID–19 is an unprecedented crisis that has put firms in extraordinary situations requiring from them strong CSR commitments and innovative CSR strategies and initiatives (Carroll, 2021; Lawton et al., 2020).

In this study, we investigate the role of the pandemic on CSR budgeting and spending in Oman, focusing on whether the pandemic influences budgets and the actual spending related to CSR activities and whether the confirmed and fatal cases affect these activities. Following Bhattacharya et al. (2009), we define CSR spending as the total amount of money spent by a firm toward CSR initiatives.

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during the year. This definition has been adopted by more recent research on CSR spending (Dutta et al., 2021; Malik et al., 2019). We define CSR budgeting as the total amount of money determined by the firm to be spent during the year on CSR activities. These two CSR dimensions are of particular interest in this study compared to standard measures such as CSR indices as CSR monetary investments are direct measures of CSR and better gauge firm CSR performance (Lee et al., 2013). Monetary CSR measures are more appropriate and direct measures of CSR performance during the COVID-19 pandemic because firms face real challenges concerning their CSR activities at this period (He and Harris, 2020).

Oman provides an excellent setting to study CSR. First, the Omani capital market authority incorporated new corporate governance (CG) principles related to CSR in the revised version of the code in 2015, requiring all listed firms from 2016 to set CSR objectives and disclose their CSR activities in their annual reports (e.g., the amount spent and the impact on sustainability) (Capital Market Authority, 2016). This is a longstanding vision of the Omani government calling private businesses to develop their local community and practice good citizenship (Salemi, 2017). To the best of our knowledge, no country has such a requirement except India, where companies must disclose the amount spent on CSR activities in their annual report (Dutta et al., 2021). Second, the government has taken many measures to combat the pandemic since the first two confirmed cases on February 24th, 2020, calling for support from corporate businesses. Despite presenting several CSR challenges, this call has received a positive response from many large firms fighting the pandemic consequences (Younas et al., 2021). Third, the requirement of disclosing information related to CSR budgeting and spending in Oman provides unique data that is rarely available in other markets. This information, particularly on budgeting, is seldom disclosed to the public. Thus, Oman represents a unique context to examine issues related to CSR and suggests policy implications beyond the Omani market.

The COVID–19 pandemic is causing humanitarian and economic panic. For example, there were more than 221 million infected cases and 4.5 million fatalities in 222 countries as of September 04th, 2021 (World Health Organization, 2021). Many economies are struggling and businesses have collapsed from its adverse consequences (Carroll, 2021; Sharif et al., 2020; Zhang et al., 2020). Unfortunately, this pandemic is still frightening people and threatening businesses, as more waves are expected in the coming months (Pitofsky, 2020) with unclear economic consequences (Zhang et al., 2020). Carroll (2021) raises interesting questions about what firms should do and how they can contribute to alleviating the harmful effects of the pandemic in this challenging time for business.

The COVID–19 outbreak has urged researchers from different fields to look at its impact. The literature shows that the pandemic has dramatically affected stock returns (Al-Awadhi et al., 2020; Ashraf, 2020), investors’ sentiment (Sun et al., 2021), risk (Zhang et al., 2020), and stock volatility (Sharif et al., 2020). However, little is known about the effect of COVID–19 on corporate CSR initiatives (Carroll, 2021; He and Harris, 2020). This paper fills this gap and extends the literature that is so far limited to CSR supporting actions (e.g., Gürlek and Kılıç, 2021, Talbot and Ordonez-Ponce, 2020) and environmental issues (Akhtaruzzaman et al., 2021; Guérin and Sunthheim, 2021). It extends research by studying the economics of CSR activities during COVID–19.

In the spirit of Garriga and Melé (2004), we propose the stakeholder theory to explain the effect of COVID–19 on CSR budgeting and spending. The authors argue that firms are affected or affect various stakeholders and must show a high level of commitment not only to primary stakeholders (e.g., shareholders) but also to other stakeholders such as customers, employees, and social communities. He and Harris (2020) note that COVID–19 is a significant challenge to test firms’ commitment to ethical business conduct and CSR. Manuel and Herron (2020) argue that firms may increase investment in socially responsible actions during COVID–19 to meet stakeholders’ expectations. Mahmud et al. (2021) suggest that firms should support society and vital stakeholders such as employees, customers, and communities during the pandemic.

Based on these arguments, we hypothesize that CSR budgeting and spending in socially difficult times would be economically substantial. Individuals during COVID–19 suffer economically and socially from the negative consequences of the pandemic, showing the need for substantial help from other community members. Firms at this time should be more responsible and their CSR contributions are expected to be more significant. With the rapid spread and severity of the epidemic, the budgeting and spending associated with CSR activities should be significantly higher than beforehand. This contribution should continue as the pandemic will return in future waves (Pitofsky, 2020). However, COVID–19 has severe effects on firms themselves, affecting their supply chains and customer demand, leading to lower profitability (Zhang et al., 2020) and significantly affecting the monetary resources available for CSR.

Our empirical results show a positive and significant relationship between COVID–19 and CSR budgeting and spending. Firms devoted large budgets following high growth of confirmed cases, while they substantially increased their spending following a growth in the death rate and the number of confirmed cases. Moreover, we show that the allocated CSR budget is not driven by the growth in confirmed and fatal cases of COVID–19 on the day of the annual general meeting (AGM) or by the number of confirmed and fatal cases on the previous day. Using a difference-in-differences design, we provide strong evidence of the causal nature of the relationship between COVID–19 and CSR budgeting and spending. Overall, our findings indicate that the pandemic gives corporate businesses incentives to act in a socially responsible manner.

The contribution of this study to the literature is fourfold. First, it supplements the nascent literature by examining the effect of

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1 It is worth noting that there is no obligation to spend the total budget on CSR activities (Dutta et al., 2021). Some of our sample firms have spent the exact planned budget, whereas others have (not) exceeded the budget.

2 This perspective is dominant in CSR studies to explain why firms invest in CSR activities (e.g., Hunjra et al., 2021; Manitza et al., 2018). It has been widely used in recent CSR studies during the COVID–19 pandemic (e.g., Manuel and Herron, 2020; Mahmud, et al., 2021). We note that stakeholder engagement (Lawton et al., 2020) and insurance-like benefits perspectives (Dumitrescu and Zakriya, 2021) may provide further explanation for CSR activities during COVID-19. Both suggest that long-term value of CSR activities for socially responsible firms motivates them to get involved in more CSR initiatives in social crisis time to protect themselves against adverse future events.
COVID–19 on CSR. Most concurrent studies show that firms initiate several actions to combat the negative consequences of the pandemic, but they are mainly descriptive and focus on large US firms. Studying large firms, Manuel and Herron (2020) and Carroll (2021) observe numerous innovative CSR strategies and initiatives devoted to alleviating the economic and social impact of the pandemic. He and Harris (2020) observe that, while COVID19 forced many firms to adopt irresponsible business activities, many examples of proactive CSR activities have been observed. For instance, García-Sánchez and García-Sánchez (2020) find that the 100 largest Spanish firms developed strategies and actions helping several stakeholders to survive during this unseen challenge, although Talbot and Ordonez-Ponce (2020) report that banks generally do little to support their clients and community. More recently, Mahmud et al. (2021) and Gürlek and Kılıç (2021) provide evidence that firms showed more respect for their employees, customers, and communities and carried out many CSR activities to reduce the negative effect of COVID–19. Unlike these studies, we empirically test how and when the pandemic motivates firms to contribute monetarily to reducing the harmful effects of the pandemic.

Second, this study contributes to previous works on the effect of COVID–19 on CSR performance indices. For instance, Akhtaruzzaman et al. (2021) report a significant role of media coverage on ESG leader indices during COVID–19, as evidenced by the transmission of contagion between capital markets during March–April 2020. Guerin and Suntheim (2021) investigate how COVID–19 affects environmental performance and find that constraints and adverse economic conditions resulting from COVID–19 reduce environmental performance. To the best of our knowledge, we are the first to expand this research by providing evidence on CSR monetary aspects in COVID–19 time and how these monetary measures of CSR are sensitive to the number of confirmed and fatal cases. This evidence answers questions He and Harris (2020) put forward about whether firms invest more or succumb to financial conditions during COVID–19 and, thus, invest less in CSR.

Third, this study relates to the fast-growing literature on how a firm’s performance depends on the severity of COVID–19. For example, Ashraf (2020) finds that an increase in the number of confirmed cases (fatal cases) is associated with low (no) stock market returns in several capital markets. Zhang et al. (2020) observe high stock market risks in countries with a high number of confirmed cases. Al-Awadhi et al. (2020) find that the growth in daily death and confirmed cases of COVID–19 leads to negative stock returns of Chinese firms. Our results provide evidence supporting the view that firms are under pressure to monitor stakeholder expectations and develop effective strategies and initiatives towards CSR during the pandemic.

Finally, it contributes to the rare CSR studies in emerging markets by examining the issue in Oman. Previous CSR studies during COVID–19 focus on developed economies. Future research should explore the topic in emerging economies (Boubakri et al., 2021).

The remainder of this paper is structured as follows. Section 2 describes the sample, data, and methodology. Section 3 reports the empirical results. Section 4 concludes.

2. Methodology

2.1. Sample and data

This study aims to explore the effect of COVID–19 on CSR budgeting and spending in Oman. Our sample starts with all Omani firms listed over 2018–2021. We eliminate financial firms (146 observations) as they behave differently with respect to CSR initiatives. We also drop firms with no data on CSR budgeting (36 observations), CSR spending (128 observations), and control variables (2 observations), reducing the final sample to 261 observations for CSR budgeting analysis and to 169 observations for CSR spending analysis. Data on daily confirmed and fatal cases of COVID–19 are from Worldometer4 and data on CSR budgeting and the date of the AGM are from AGM resolutions published on the capital market website. We use annual reports for data on CSR spending and financial data.5 It is worth noting that data on CSR monetary investments is not a requirement in most capital markets and is seldom available in the annual reports (Dutta et al., 2021). Omani-listed firms have to provide data on the planned and actual amounts of money used for CSR activities, particularly, directed to philanthropic activities (e.g., donations) and community relations activities (e.g., sponsoring religious or community activities).

2.2. Empirical models

We use a fixed effects panel data methodology with robust standard errors to estimate our equations and help control for unobservable heterogeneity that may affect CSR budgeting and spending.6 The empirical specifications are as follows.

\[
CSRB_{it} = \beta + \beta_1 COVID - 19_{it} + \beta_2 Size_{jt - 1} + \beta_3 Leverage_{jt - 1} + \beta_4 Cashflow_{jt - 1} + \beta_5 ROA_{jt - 1} + \beta_6 Growth_{jt - 1} + \beta_7 Geographicsegments_{jt - 1} + \beta_8 Yeardummies + \varepsilon_{it} \tag{1}
\]

3 Some firms do not fully respect the requirements of the CG code by disclosing matters related to CSR activities and initiatives in their annual reports, omitting to report the monetary costs and budgets of these activities.

4 https://www.worldometers.info/coronavirus/?utm_campaign=homeAdvegas17.

5 Appendices B and C provide examples related to the disclosure on CSR budgeting and amounts spent for CSR activities during the pandemic.

6 The F-test and Hausman tests support the use of the fixed effects model. This methodology is widely used in similar COVID-19 studies (Al-Awadhi et al., 2020, Sun et al., 2021).
where CSRB is the CSR budget allocated and approved at the AGM for CSR activities in the current year. CSRS is the CSR spending measured as the total amount spent for CSR activities in the current year. COVID−19 represents the COVID−19 event and is given the value one for March, 11th 2020 onwards, and zero otherwise. This date corresponds to the day the World Health Organization declared COVID−19 as a global pandemic. 1DAYGCC (1DAYGDC) is one day before the AGM growth rate in the number of confirmed (fatal) cases. It proxies for the severity of the COVID−19 situation (Al-Awadhi et al., 2020; Ashraf, 2020). YENDCC (YENDDC) proxies the total number of confirmed (fatal) cases at the firm’s fiscal year-end. We calculate these cases as the total number of confirmed (fatal) cases from one day after the AGM to the fiscal year-end date. This reflects how COVID−19 drives CSR activities throughout the year. We use a natural logarithmic transformation of the total number of confirmed (fatal) cases to mitigate the effects of outlier observations.7

To avoid isolating the effect of COVID−19, we introduce a set of firm-level control variables that are deemed to affect CSR budgeting and spending (Leong and Yang, 2021): firm size (Size), leverage (Leverage), operational cash flow (Cashflow), return on assets (ROA), sales growth (Growth), and geographical segments (Geographic segments). Appendix A details the definitions of all the variables. The regressions include year dummies to control for the time-fixed effects. All controls in Eqs. (1) and 2 are measured at the beginning of the fiscal year since CSR budgets are set in the AGM during the first months of the fiscal year.

3. Empirical findings

Table 1 presents the descriptive statistics and univariate analyses. The average value of CSRB (CSRS) is 54,696.86 (85,697.79), with a high standard deviation, suggesting significant differences in the contributions of Omani firms to CSR activities.8 Panel B shows differences in the mean (median) for CSRB and CSRS depending on the period, before or after the outbreak. The results suggest that CSR budgeting and spending are more significant during the pandemic than before. The empirical results in Panel C show that the average daily growth in COVID−19 confirmed and fatal cases one day before the AGM (1DAYGCC and 1DAYGDC) is 3 and 2 percent, respectively. Similarly, the average number (log) of confirmed and fatal cases on the date of company year-end since the date of AGM (YENDCC and YENDDC) is 18,558 (5.15) and 15,519 (4.99), respectively.

Tables 2 and 3 report the main results for the overall effect of COVID−19 and the cases of infection and death on CSR budgeting and spending.9 For brevity, we discuss the findings for the variables of interest, leaving aside the interpretation of the control variables. In all columns of Table 2, the coefficients on COVID−19 are positive and statistically significant at the conventional levels, indicating that the pandemic has led to a considerable increase in the amounts allocated to and spent on CSR activities. Turning to the economic significance of COVID−19, CSRB and CSRS have increased more during the pandemic by 13 and 23 percent, respectively.10 This increase is considerable, given the significant decline in profitability that firms experienced during COVID−19 (Zhang et al., 2020). Consistent with CSR stakeholder theories (Garriga and Melé, 2004), our results suggest that firms react actively during health disasters to relieve the damaging effects on society. This evidence supports the view that firms have adapted their CSR strategies and commitments to accommodate the expectations of stakeholders during COVID−19 and that they are aware of the crucial linkage between social problems such as the pandemic and the survivability of businesses (Carroll, 2021). It also coincides with He and Harris (2020) argument that firms can relieve social and environmental challenges during the COVID−19 crisis by adopting genuine and authentic CSR initiatives. Although the pandemic poses operational and financial challenges to firms, the evidence in this study suggests that crises such as COVID−19 do not reduce firms’ investment in CSR activities by allocating and spending a large amount on these activities to genuinely reduce the economic shocks to major stakeholders such as employees, customers, and communities. This is also in line with Sakunasingha et al. (2018) who document that the financial crisis of 2008 did not force firms to deviate from their CSR commitment.

Table 3 (Columns 1 and 2) shows that the coefficient on 1DAYGCC is negative but statistically insignificant whereas that on 1DAYGDC is positive and statistically significant in the CSRB equations (at the 1% threshold level), implying that the growth in the number of COVID−19 fatalities is associated with more significant budgets for CSR activities. However, this result does not hold for confirmed cases. In economic terms, a one standard deviation increase in 1DAYGDC leads to an increase in CSR budgeting of 15

\[
CSRB_{it} = \beta_0 + \beta_1 1DAYGCC_{it}/1DAYGDC_{it} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 Cashflow_{it-1} + \beta_5 ROA_{it-1} + \\
\beta_6 Growth_{it} + \beta_7 Geographic segments_{it} + \beta_8 Yeardummies + \epsilon_{it} 
\]

(2)

\[
CSRS_{it} = \beta_0 + \beta_1 COVID_{i-19} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 Cashflow_{it-1} + \beta_5 ROA_{it-1} + \\
\beta_6 Growth_{it} + \beta_8 Yeardummies + \epsilon_{it} 
\]

(3)

\[
CSRS_{it} = \beta_0 + \beta_1 YENDCC_{it}/YENDDC_{it} + \beta_2 Size_{it} + \beta_3 Leverage_{it} + \beta_4 Cashflow_{it-1} + \beta_5 ROA_{it-1} + \\
\beta_6 Growth_{it} + \beta_7 Geographic segments_{it} + \beta_8 Yeardummies + \epsilon_{it} 
\]

(4)

7 Untabulated results show that the use of the total number of confirmed (fatal) cases instead of the logarithmic transformation does not qualitatively affect our results.

8 The exchange rate for 1 Omani Rial is, on average, 2.6 USD.

9 Table 3 includes one variable of interest at once to mitigate the problem of multicollinearity due to high correlation between them. Moreover, we winsorize all continuous variables at the 1st and 99th percentiles to reduce the effect of outliers.

10 The economic significance is measured by multiplying the coefficient on COVID−19 by its standard deviation (e.g., for CSRB 13717.73∗0.50=6858.87) and then dividing it by mean of CSRB (CSRS) (e.g., for CSRB 6858.87/54696.86=0.13).
percent. The coefficients on YENDCC and YENDDC (Columns 3 and 4) affect positively and significantly CSRS (at the 1% level), suggesting that COVID–19 confirmed and fatal cases significantly drive the amount of money spent on CSR activities. As for the economic significance, a one standard deviation increase in YENDCC (YENDDC) is associated with an increase in CSR spending by 19 (18) percent. These findings suggest that the number of fatal cases affects only CSR budgeting whereas the number of confirmed and fatal cases affects CSR spending. CSR spending–effective present-decision of investment–varies depending on intertemporal considerations based on confirmed (past and present) and fatal cases (past). CSR budgeting is a prospective decision that seems to be mainly shaped by past factors (fatal cases). This evidence intuitively explains the increased CSR budgeting and spending during COVID–19 as a response to the severity of the pandemic and meeting stakeholders’ demand for CSR. The numbers of confirmed and fatal cases caused by the pandemic have materialized the current epidemiological issue and shown the need for genuine CSR. This is in

| Variables | N  | Mean  | Std. Dev. | Min | Q1   | Median | Q3   | Max  |
|-----------|----|-------|-----------|-----|------|--------|------|------|
| CSRB      | 261| 54,696.86 | 112,074.89 | 0.00 | 3000.00 | 15,000.00 | 50,000.00 | 780,000.00 |
| CSRS      | 169| 85,697.79 | 325,410.50 | 0.00 | 1500.00 | 13,467.00 | 50,000.00 | 3,858,366.00 |
| COVID–19  | 261| 0.50   | 0.50      | 0.00 | 0.00  | 1.00   | 1.00 | 1.00 |

Panel B: Mean and median difference for CSR budgeting and spending based on COVID–19 groups

| Variables | Mean difference (t-test) | Median difference (Mann–Whitney test) |
|-----------|--------------------------|---------------------------------------|
| CSRB      | 58,553.40                | 25,000.00                             |
| CSRS      | 76,881.54                | 22,733.50                             |

Panel C: Summary statistics for COVID–19 confirmed and death cases

| Variables | Mean  | Std. Dev. | Min | Q1   | Q2   | Q3   | Max  |
|-----------|-------|-----------|-----|------|------|------|------|
| 1DAYGCC   | 0.03  | 0.09      | 0.00| 0.00 | 0.01 | 0.04 | 1.00 |
| 1DAYGDC   | 0.02  | 0.04      | 0.00| 0.00 | 0.00 | 0.01 | 0.17 |
| YENDCC (Total) | 18,557.77 | 22,810.64 | 0.00 | 0.00 | 0.00 | 29,457.00 | 122,579.00 |
| YENDDC (Total) | 15,518.73 | 17,224.73 | 0.00 | 0.00 | 0.00 | 28,197.00 | 44,232.00 |

This table summarizes the statistics for the variables of interest. It also provides the mean (median) comparison for the CSR budgeting and spending prior and post COVID–19. The sample includes all non-financial firms listed on the Omani stock market with available data on CSR budgeting and spending over 2018–2021. a, b and c denote statistical significance at the 1, 5, and 10% levels, respectively. The definition of all variables is in Appendix A.

Table 2

Regression results for the effect of COVID–19 on CSR budgeting and spending.

| Variables | (1) | (2) |
|-----------|-----|-----|
| COVID–19  | 13,717.73 (2.03) | 38,839.47 (14.44) |
| Size      | 14,415.51 (5.97)  | 6605.08 (1.30)    |
| Leverage  | 30,057.69 (2.49)  | -8131.97 (-0.84)  |
| Cashflow  | -10,867.59 (-2.52) | 41,599.30 (1.82)  |
| ROA       | 1778.25 (0.14)    | -75,138.78 (-3.13) |
| Growth    | -343.124 (-0.16)  | 29.79 (0.02)      |
| Geographicsegments | 715.46 (1.10) | 20,181.23 (3.96) |
| Yeardummies | Included | |
| Constant  | -210,160.05 (-4.64) | -105,927.68 (-1.18) |
| F–value   | 6.16 (6.16)       | 5.18 (5.18)       |
| R²        | 0.081             | 0.089             |
| N         | 261               | 169               |

This table reports the results of fixed effect regressions of COVID–19 on CSR budgeting (CSRB) and spending (CSRS). All continuous variables are winsorized at the 1st and 99th percentiles. The robust standard errors control for the potential influence of heteroscedasticity and autocorrelation. Column 1 (2) shows the corresponding results for the effect of COVID–19 on CSR (CSRS). T–values are in parentheses. a, b and c denote statistical significance at the 1, 5, and 10% levels, respectively. The definition of all variables is in Appendix A.
the number of these cases on the date of the AGM (treatment groups cases (those in Table 3. Second, we explore the sensitivity of our results related to COVID spending, we use the changes in CSR budgeting (fatal) cases higher than the sample means as treatment groups
Following Flammer and Ioannou (2021), we use a quasi-experimental setting to test the effects of COVID firms are more sensitive to the confirmed (fatal) cases on the day before the AGM when determining their CSR budgets. These findings, variables is in Appendix A.

This table presents the results of fixed effect regressions of the growth of COVID confirmed and death growth on CSR budgeting and spending.

| Variables     | (1) | (2) | (3) | (4) |
|---------------|-----|-----|-----|-----|
| 1DAYGCC       | -12,110.91 | -12,110.91 | -12,110.91 | -12,110.91 |
| YENDCC        | 3141.10 | 3141.10 | 3113.74 | 3113.74 |
| Size          | 14,875.75^a | 13,792.15^a | 7824.79 | 7862.45 |
| Leverage      | 30,445.38^b | 27,047.41^b | -6183.41 | -6187.83 |
| Cashflow      | -11,017.69^b | -10,234.66^b | 35,333.01 | 35,519.00 |
| ROA           | 3354.69 | 3209.46 | -60,781.77^b | -60,674.89^b |
| Growth        | -283.43 | -1586.41 | 268.28 | 265.22 |
| Geographicssegments | 695.53 | 637.53 | 7697.82^b | 7813.83^b |
| Yeardummies   | (1.08) | (0.94) | (2.11) | (2.11) |
| Constant      | -218,325.22^a | -197,804.60^a | -90,352.18 | -91,050.31 |
| F-value       | 3.79^a | 10.20^b | 4.09^a | 4.07^a |
| R²            | 0.07 | 0.12 | 0.10 | 0.10 |
| N             | 261 | 261 | 169 | 169 |

This table presents the results of fixed effect regressions of the growth of COVID–19 confirmed cases (1DAYGCC and YENDCC) and death cases (1DAYGDC and YENDDC) on CSR budgeting (CSRB) and spending (CSRS). Columns (1) and (2) report the results for the effect of 1DAYGCC and 1DAYGDC on CSRB, respectively, while columns (3) and (4) portray the results for the effect of YENDCC and YENDDC on CSRS, respectively. All continuous variables are winsorized at the 1st and 99th percentiles. The robust standard errors control for the potential influence of heteroscedasticity and autocorrelation. T-values are in parentheses. a, b and c denote statistical significance at the 1, 5, and 10% levels, respectively. The definition of all variables is in Appendix A.

line with stock market studies showing that the severity of an outbreak, in terms of confirmed and fatal cases, drives investors’ decisions related to trading stocks (Al-Awadhi et al., 2020; Ashraf, 2020). Overall, our findings confirm the importance of CSR in the strategic planning of firms and their social behavior during this challenging pandemic period.

We conduct additional analyses to gain further insights. Table 4 re-estimates Eqs. (1) and 3 after performing a natural logarithmic transformation of CSRB and CSRS. Columns 1 and 2 (Panel A) show consistent positive and statistically significant coefficients on COVID–19 as in Table 2. Using these new dependent variables for Eqs. (2) and 4 (untabulated), we find qualitatively similar results to those in Table 3. Second, we explore the sensitivity of our results related to COVID–19 confirmed and fatal cases by using the growth in the number of these cases on the date of the AGM (SDAYGCC and SDAYGDC) and by using the natural logarithm of the total number of cases (1DAYNCDC and 1DAYNDC). Columns 3–6 (Panel A) show that the only significant coefficient is for SDAVGDC, suggesting that firms are more sensitive to the confirmed (fatal) cases on the day before the AGM when determining their CSR budgets. These findings, (untabulated) are qualitatively similar when we use cases for two, three, and four days before the AGM.

Finally, we adopt a difference-in-differences (DID) approach by taking advantage of the exogenous effect of the pandemic shock. Following Flammer and Ioannou (2021), we use a quasi-experimental setting to test the effects of COVID–19 confirmed and fatal cases on CSR budgeting and spending. In this setting, we set observations with growth in the confirmed (fatal) cases before the AGM as treatment groups TREAT1 (TREAT2) in the context of CSR budgeting. For CSR spending, we assign firms with a number of confirmed (fatal) cases higher than the sample means as treatment groups TREAT3 (TREAT4). To relate these groups to CSR budgeting and spending, we use the changes in CSR budgeting (ΔCSRB) and spending (ΔCSRS) in replacing our main outcome variables. Table 4 (Panel B) shows the treatment groups (e.g., TREAT1) have positive and highly statistically significant coefficients, indicating that results reported in Table 3 are more likely to be causal rather than simple association.

4. Conclusion

The COVID–19 pandemic has urged researchers to explore the influence of this unprecedented health shock on various economic outcomes. However, little research has examined its effect on CSR and none its influence on monetary aspects of CSR. Using data from

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11 We have obtained data for 2017 on CSRB and CSRS to compute the differences for the first year of the sampled period (2018). This will ensure that the sample size is not changed.
supporting genuine and authentic CSR throughout. The evidence from this study may inform these people that, to some extent, they fatalities on CSR activities.

Our evidence addresses these differences in-differences analysis: Columns (1) and (2) for the effect of the COVID–19 confirmed cases (SDAYGDC) and death cases (SDAYGCC) on CSR budgeting (LNCSRBR); columns (3) and (4) for the effect of the growth of COVID–19 confirmed cases (SDAYGDC) and death cases (SDAYGCC) on CSR budgeting (CSRB); and columns (5) and (6) for the effect of the natural logarithm of the number of COVID–19 confirmed cases (1DAYGDC) and death cases (1DAYGCC) on CSR budgeting (CSRB). Panel B reports the results of the difference-in-differences analysis: Columns (1) and (2) for the effect of the TREAT1 and TREAT2 on the change in CSR budgeting (ΔCSRBR); and columns (3) and (4) for the effect of the TREAT3 and TREAT4 on the change in CSR budgeting (ΔCSRB); Controls refers to control variables: Size, Leverage, Cashflow, ROA, Growth, and Geographic segments. All continuous variables are winsorized at the 1st and 99th percentiles. The robust standard errors control for the potential influence of heteroscedasticity and autocorrelation. T–values are in parentheses. a, b and c denote statistical significance at the 1, 5, and 10% levels, respectively. The definition of all variables is in Appendix A.

an emerging market, Oman, our findings show that the pandemic results in a considerable increase in CSR budgeting and spending. They also suggest that CSR budgeting is influenced by the number of fatal cases, while confirmed and fatal cases influence CSR spending. These findings suggest that corporate businesses practice responsible citizenship, which motivates them to be among the first in helping society when facing challenging situations. The chief novelty of this study is that it considers the monetary aspects of CSR (budgeting and spending) in general and particularly in a time of crisis, where most studies look at CSR ratings or indices to explore CSR’s antecedents and consequences. It is also the first study to provide empirical evidence on the effect of COVID–19 cases and fatalities on CSR activities.

At the onset of COVID–19, CSR scholars speculated on “what firms are going to do to respond to this worldwide crisis” (Carroll, 2021) and “what drives some firms to be more ethical and socially responsible” (He and Harris, 2020). Our evidence addresses these crucial questions and asserts that firms do not always extract the benefits for their shareholders but also consider CSR as necessary for their sustainability. Thus, our study has implications for governments, policymakers, investors, and other stakeholders. For example, governments have expended considerable economic and social costs to relieve the unprecedented negative consequences of COVID–19 on their people. In many cases, they have called on businesses to support them in combating the pandemic, and this call has received a response from large and brand-name firms (He and Harris, 2020; Manuel and Herron, 2020; Younas et al., 2021). Our sample includes various types of firms, valuable evidence for governments in efficiently planning for future pandemics (Pitofsky, 2020).

Although the pandemic resulted in a shortage of CSR resources, managers, directors, and shareholders remain CSR orientated, supporting genuine and authentic CSR throughout. The evidence from this study may inform these people that, to some extent, they

Table 4
Robust analysis.

| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
|-----------|-----|-----|-----|-----|-----|-----|
| COVID–19  | 0.30$^a$ | 0.14$^a$ | 5123.61 | 90,774.66$^a$ | 990.90 | 1657.35 |
| SDAYGCC   | (3.59) | (8.90) | (0.31) | (7.45) | (1.24) | (0.79) |
| SDAYGDC   | 23.13$^a$ | 11.85$^a$ | 11.49$^a$ | 35.74$^a$ | 5.13$^a$ | 4.86$^a$ |
| 1DAYNDC   | 0.14 | 0.08 | 0.07 | 0.08 | 0.08 | 0.08 |
| N         | 261 | 261 | 261 | 261 | 261 | 261 |

Panel A presents different regression results with alternative measures of the main variables. Columns (1) and (2) for the effect of the COVID–19 (COVID–19) on the natural logarithm of CSR budgeting (LNCSRBR) and spending (LNCSSRS); columns (3) and (4) for the effect of the growth of COVID–19 confirmed cases (SDAYGDC) and death cases (SDAYGCC) on CSR budgeting (CSRB); and columns (5) and (6) for the effect of the natural logarithm of the number of COVID–19 confirmed cases (1DAYNDC) and death cases (1DAYGCC) on CSR budgeting (CSRB).
have passed the CSR tests during the COVID–19 (Carroll, 2021; He and Harris, 2020). However, these policy makers should note that COVID–19 expands stakeholders’ expectation that firms will be more socially responsible, and that green-wash, pink-wash, and lip-service CSR activities will not be sufficient in the post-COVID–19 period to ensure long-term survival and development of businesses (He and Harris, 2020). Thus, policy makers must respond to this new trend by upgrading their CSR strategies, or at least maintaining those strategies practiced during the pandemic. Finally, our evidence can assure investors about the perspective of firms to succeed in the short and long run. During COVID–19, investors were afraid of business failure, putting their investments at risk. Our evidence documents that firms strategically compensated for falling profitability by investing in genuine CSR activities during the pandemic. This strategy has been proven to increase stock returns during and after crisis (Lins et al., 2017; Qiu et al., 2021).

Although our study adds new evidence to the CSR literature, we encourage future studies to enlarge our understanding, because our study limits its analysis to the direct effect of COVID–19 on budgeting and spending on CSR activities. This effect may be influenced by corporate governance characteristics, such as the board of directors and ownership structure. Also, we encourage future studies to expand our understating of CSR budgeting and spending by examining how they are offset by high performance post-COVID–19. The existing evidence is dominated by CSR ratings, which do not necessarily reflect the actual CSR endeavors of firms (Bae et al., 2021). The evidence on this issue may encourage firms and regulators to adopt budgeting and spending disclosure.

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Saeed Rabea Baatwah: Conceptualization, Methodology, Data curation, Writing – review & editing. Adel Ali Al-Qadasi: Data curation, Writing – review & editing. Amer Mohammed Al-Shehri: Writing – review & editing, Investigation. Imen Derouiche: Writing – review & editing.

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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**Appendix A. Definitions of variables**

| Variables    | Definitions |
|--------------|-------------|
| **Main analysis** |
| **CSRB**     | The total amount allocated by the firm for CSR activities and approved by the AGM. |
| **CSRS**     | The total amount spent by the firm for CSR activities during the year and approved by the AGM. |
| **COVID–19** | An indicator variable equals one if the period is a COVID–19 period (on or after 11/3/2020 as the formal declaration date of WHO) and 0 otherwise. |
| **1DAYGCC**  | The one day before the AGM growth of COVID–19 confirmed cases. It is calculated as the difference between the total number of confirmed cases on that day and one day before, divided by the total number of confirmed cases one day before that day. |
| **1DAYGDC**  | The one day before the AGM growth of COVID–19 death cases. It is calculated as the difference between the total number of death cases on that day and one day before it divided by the total number of death cases one day before that day. |
| **YENDCC**   | The natural logarithm of the total number of COVID–19 confirmed cases at the company year-end date. |
| **YENDDC**   | The natural logarithm of the total number of COVID–19 death cases at the company year-end date. |
| **Size**     | The natural logarithm of total assets. |
| **Leverage** | The total debt divided by total assets. |
| **Cashflow** | The operational cash flow divided by total assets. |
| **ROA**      | The net income divided by total assets. |

(continued on next page)

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12 See Boubaker and Nguyen (2012) for more details on the role of corporate governance (e.g., board of directors and ownership structure) in CSR decisions.
Appendix B. Examples of AGMs approving CSR budgeting

| Firms              | AGM date | Statement                                                                 |
|--------------------|----------|---------------------------------------------------------------------------|
| Shell Oman Marketing Company | 10/3/2020 | “The proposal of allocating RO112,000 to support social services for the financial year ending 31 December was approved”. |
| Oman Telecom       | 10/5/2020 | “Approved allocating of OMR 500 K (Rial Omani Five Hundred Thousands) for the purpose of Corporate Social Responsibility (CSR) for the year 2020” |
| National Detergent Company | 31/3/2021 | “The shareholders approved allocation of RO 10,000 to fulfill the Company’s Corporate Social responsibilities for the year ending on 31 December 2021” |

Appendix C. Examples of disclosed CSR spending in the annual reports

| Company          | Year-end date | Statement                                                                 |
|------------------|---------------|---------------------------------------------------------------------------|
| A’Saffa Food     | 31/12/2020    | “…the Corporate Social Responsibility committee, provided financial support of RO 50,000 to finance five recreational outlets to be built in Thumrait, Dhofar”. |
| Sohar Power      | 31/12/2020    | “…the company has contributed and support the Ministry of Health with 10,000 OMR to alleviate the spread of COVID-19. In addition to 10,000 OMR, The Company has contributed 15,000 OMR to the SIPC initiative ….. The donation amount is around 8000 OMR”. |
| Gulf Stone Co.   | 31/12/2020    | “Social Welfare Actual - 2020 (R.O.)290 Budgeted - 2020 (R.O.)2000 ” |

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