



Are socially responsible firms in the U.S. tourism and hospitality industry better off during COVID-19?

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1. Introduction

Since COVID-19 struck Wuhan, China, in early 2020, the novel infectious disease has caused unprecedented havoc on every industry sector globally, and the tourism and hospitality industry has received the hardest hit (Gursoy & Chi, 2020). Governmental strategies to attenuate the spread of COVID-19, such as community lockdowns, stay-at-home orders, and travel restrictions, mandated tourism and hospitality firms to temporarily cease their operations, resulting in drastic revenue loss (Song et al., 2020). Even after the governmental policies have lessened, uncertainty about the pandemic's spread and severity of the pandemic made customers hesitant to dine out and travel, which has exacerbated the damage to the tourism and hospitality firms during the pandemic (Zheng et al., 2020).

As the pandemic has triggered a crippling effect on economic activities, numerous studies in the tourism and hospitality literature have examined the adverse impact of COVID-19 on the tourism and hospitality industry by focusing on labor markets (Huang et al., 2020), a country-level industry index (Sharma & Nicolau, 2020), and job engagement and turnover intent (Jung et al., 2020). However, the impact of COVID-19 on firm- and property-level financial performance has been relatively understudied while multiple empirical efforts have existed in other industry contexts (e.g., Baker et al., 2020; Ramelli & Wagner, 2020). Examining the impact of COVID-19 on a firm's financial performance in the tourism and hospitality industry seems to be a salient topic given that empirical results will provide guidelines for businesses to effectively cope with the unprecedented pandemic with appropriate strategic directions with their resources and capabilities (Song et al., 2020; Zenker & Kock, 2020). Furthermore, the crippling effect of COVID-19 on a firm's performance may differ, hinging on a firm's pre-pandemic characteristics and strategies (Ramelli & Wagner, 2020;

Song et al., 2020). For example, Ramelli and Wagner (2020) revealed that declines in stock returns reacting to COVID-19 varied across and even within industries, dependent on a firm's pre-pandemic characteristics (e.g., international trade and financial strength) related to COVID-19. That is, while examining the impact of COVID-19 on firm performance, firm-specific characteristics should be contemplated to reveal the impact of COVID-19 more specifically.

Among multiple pre-pandemic firm-level characteristics, this study focuses on a tourism and hospitality firm's corporate social responsibility (CSR) activities since relationships between stakeholders (e.g., employees, suppliers, customers, and community) of a firm may formulate resilience to the adverse impact of COVID-19 on its performance (Ding et al., 2020). CSR—defined as “situations where the firm goes beyond compliance and engages in actions that appear to further some social good, beyond the interests of the firm, and that which is required by law” (McWilliams et al., 2006, p. 1)—has received extensive attention from researchers across several business disciplines in the past decades (Godfrey et al., 2009) due to the significant financial implications for CSR investments. Based on the stakeholder theory (Freeman, 1984), the overall orientation between CSR and firm performance in previous empirical studies is positive (Wang et al., 2016). That is, CSR activities help firms generate competitive advantages by maintaining positive relationships with diverse stakeholders. Recent studies have put forward the idea that CSR performance is important for building firm resilience, a capability to adjust to and recover from unexpected shock, from an investor perspective (e.g., Albuquerque et al., 2020; Jia et al., 2020). On the other hand, several studies suggest that CSR investments may impose high costs on firms (e.g., Aupperle et al., 1985; Barnett & Salomon, 2012). This argument draws on the neo-classical economic viewpoint that firms should focus on serving their self-interest to maximize resource allocation (Friedman, 1970).

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Despite the mixed results between CSR and firm performance, another research stream focuses on whether CSR activities can provide “insurance-like” protection to firms to preserve shareholder value when negative events occur (Godfrey, 2005; Godfrey et al., 2009). The current study recognizes that COVID-19 perfectly functions as a demanding external crisis, which needs empirical confirmation on whether CSR activities play a role in creating the “insurance-like” protection and formulating resilience for firms to the COVID-19. Accordingly, this study aims, first, to examine the impact of COVID-19 on a firm’s financial performance, measured by stock returns during the pandemic period in the U.S. tourism and hospitality context. Next, as the primary focus, the current study explores the moderating impact of CSR activities on the relationship between COVID-19 and firms’ stock returns. This study’s results contribute to the tourism and hospitality literature by examining the influence of COVID-19 on the industry with the sample, consisting of the U.S. publicly-traded hotel, restaurant, and casino firms. Further, this study’s results add value to the CSR literature by suggesting that a firm’s CSR engagement provides the “insurance-like” protection even in an extremely challenging global external shock, such as COVID-19 in our research setting. Additionally, this study’s results will be conducive to tourism and hospitality firms’ strategic reactions to future unexpected external shocks.

2. Literature review and hypotheses development

2.1. The impact of COVID-19 on hospitality firms’ stock performance

Stock markets have experienced exceptional stock declines and price fluctuations during the pandemic shock, much worse than many previous economic crises in that the cause, scope, and damage of the current pandemic has been still uncertain (Ramelli & Wagner, 2020). Specifically, while previous economic crises, such as the 2008 global financial crisis, were caused by financial imbalances leading to an increase in financial risks of a firm, COVID-19 has abruptly and directly restricted the economic activities of a firm (Bernanke, 2020). Investors thereby have been concerned about prolonged revenue loss and damage to firms’ financial liquidity in which they invested (Ding et al., 2020; Song et al., 2020). For example, Baker et al. (2020) revealed that government restrictions on commercial activities and public encouragement for volunteering social distancing during the COVID-19 shock resulted in drastic stock declines in the U.S. stock market than previous pandemics. Although governmental aids, such as fiscal stimulus, the paycheck protection program (PPP), and the Coronavirus aid, relief and economic security (CARES) act, have been devised to attenuate damage of COVID-19 to every industry sector, volatile stock market situations along with stock declines may continue insofar as COVID-19 comes to an end. Considering that the tourism and hospitality industry has been regarded as one of the most damaged industries due to COVID-19, the current study postulates a negative impact of COVID-19 on stock returns of firms in the U.S. tourism and hospitality industry.

H1: COVID-19 impacts on a tourism and hospitality firm’s stock returns.

2.2. The moderating role of CSR

Godfrey et al. (2009, p. 426) explain the insurance mechanism of CSR activities as “certain types of CSR activities can generate moral capital or goodwill that tempers punitive sanctions by stakeholders during a negative event.” Godfrey et al. (2009) assert that CSR activities signal that the firm is not completely profit-making and self-interested but possesses an altruistic orientation towards various stakeholders. When stakeholders perceive such a signal, the firm generates moral capital and goodwill (Godfrey, 2005). From the cognitive dissonance perspective (Festinger, 1957), when negative events occur to a firm with high moral capital levels, stakeholders will experience conflicts in attitude and beliefs about the firm and produce feelings of mental

discomfort. The feelings of mental discomfort motivate stakeholders to selectively pay attention to information consistent with their previously held positive beliefs toward the firm (i.e., cognitive bias process), resulting in defensive information processing with a bias in the direction of their preferred conclusion (Kunda, 1999). Thus, negative information related to the crisis will likely be discounted or dismissed by stakeholders through the cognitive bias process (Sohn & Lariscy, 2015).

While most empirical studies focus on the buffering effect of CSR during the negative events that are specifically linked to the firm (e.g., product-harm crises and socially responsible crises; Godfrey et al., 2009; Klein & Dawar, 2004), several studies examine the general events affecting the whole economy (e.g., 2008–2009 financial crisis and 2020 COVID-19 pandemic). Lins et al. (2017) highlight that CSR activities can create trust, which buffers a general negative event affecting the whole economy. Trust refers to “the expectation that another person (or institution) will perform actions that are beneficial or at least not detrimental, to us regardless of our capacity to monitor those actions (Sapienza & Zingales, 2012, p. 124). CSR activities can generate trust and cooperation norms by increasing stakeholders’ moral expectation since CSR activities single the altruistic orientation and contribute positively to the community and social life (Lins et al., 2017).

The trust and cooperation may pay off more when the overall trust in all companies and the macro-economy is bad, such as during the COVID-19 pandemic. The COVID-19 pandemic could bring significant uncertainty and stock market volatility to the overall tourism and hospitality industry because typical operations of the industry such as hotels, restaurants, and casinos were directly and severely hit by the pandemic where many had to temporarily close their businesses (AHLA, 2020; NRA, 2020). Guiso et al. (2008) suggest that the decision to invest in stocks requires assessing the risk-return trade-off given the existing data and an act of trust that the data in our possession are reliable and the overall system is fair. Especially during the current pandemic with unprecedented impacts on the global markets, investors may rely more on a firm’s moral capital and trust to make investment decisions than on the traditional risk-return assessment based on the firm’s previous financial information, which may not be perceived as a reliable evaluation approach due to extreme uncertainty (Lins et al., 2017). Accordingly, those firms with higher levels of moral capital and goodwill built from CSR activities can be perceived as more trustworthy. Investors may place a valuation premium on these firms when the overall trust in tourism firms is low. Consequently, the valuation premium perceived by investors can mitigate the impact of COVID-19 on tourism firms’ stock prices. Furthermore, considering the significance of intangible assets, such as reputation, particularly for the service industry, including the tourism and hospitality sector (Barich & Kotler, 1991), the proposed mitigating effect of CSR engagement is likely to play a critical role.

Moreover, according to the enlightened stakeholder theory (Jensen, 2002), the “insurance-like” protection can exist due to a firm’s various stakeholders other than investors, such as employees, suppliers, and local communities. Through a firm’s active and strategic engagement in various CSR initiatives, the firm can create ‘purpose’ and ‘reputation’ among its multiple stakeholders and even with unknown, possibly differing, consequences from those individual stakeholders, the support from a broad set of stakeholders other than investors will likely enhance the magnitude of the “insurance-like” protection.

Thus, the current study examines the “insurance-like” protection effect of CSR by testing the mitigating role of pre-crisis CSR on the negative effect of the COVID-19 on the U.S. tourism and hospitality firms’ performance as hypothesized below.

H2: The CSR performance positively moderates the negative effect of the COVID-19 on a tourism and hospitality firm’s stock returns.

3. Methodology

3.1. Data

This study's sample comprises publicly-traded tourism and hospitality firms in the U.S. based on the North American Industry Classification System (NAICS). In specific, the sample includes casino hotels (NAICS 721120), casinos except for casino hotels (NAICS 713210), hotels except for casino hotels (NAICS 721110), full-service restaurants (NAICS 722511), and limited-service restaurants (NAICS 722513). Considering that the World Health Organization (WHO) declared COVID-19 as a public health emergency of international concern on January 30th and as a pandemic on March 11th, 2020, and the pandemic has caused prolonged and sustained damage to all industry sectors (World Health Organization, 2020), this study set up the sample period as extensive as possible from January 3rd to November 27th, 2020.

This study retrieved the required data for analyses mainly from four sources: 1) the number of COVID-19 confirmed cases retrieved from the WHO website (covid19.who.int); 2) firms' stock price data retrieved from Yahoo Finance; 3) firms' CSR data retrieved from CSRHub database; and 4) pre-pandemic firm characteristics from the COMPUSTAT annual database.

Given that shareholders and investors may make significant decisions from a long-term perspective in the face of uncertainty, this study used 3-year (i.e., 2017–2019) average firm characteristics instead of 1-year firm characteristics (the latest corporate information that shareholders and investors can refer to). After removing observations with missing values, the final sample consists of 57 firms, yielding 2,736 observations, further explained in the following sections.

3.2. Model and estimation method

The following regression model is proposed to test the study's hypotheses:

$$\text{RETURNS}_{it} = \alpha_0 + \alpha_1 \text{COVID19}_t + \alpha_2 \text{CSR}_{i, \text{pre-2020}} + \alpha_3 \text{COVID19}_t \times \text{CSR}_{i, \text{pre-2020}} + \alpha_4 \text{SIZE}_{i, \text{pre-2020}} + \alpha_5 \text{LEV}_{i, \text{pre-2020}} + \alpha_6 \text{ROA}_{i, \text{pre-2020}} + \alpha_7 \text{MTB}_{i, \text{pre-2020}} + \alpha_8 \text{FR}_{i, \text{pre-2020}} + \alpha_9 \text{INT}_{i, \text{pre-2020}} + \alpha_{10} \text{TIME}_t + \alpha_{11} \text{SIN-DEX}_t + \alpha_{12} \text{FISCAL}_1t + \alpha_{13} \text{FISCAL}_2t + \alpha_{14} \text{CB}_1 + \alpha_{15} \text{CB}_2 + \varepsilon_{it}$$

where RETURNS represents weekly stock returns (percentage) of each firm within a week; COVID-19 represents the Where weekly growth rate of the number of confirmed U.S. COVID-19 cases; CSR represents overall CSR rating (CSR_Total) or CSR rating in each dimension (CSR_C, CSR_Em, and CSR_En); SIZE represents firm size; LEV represents debt-to-equity ratio of each firm; ROA represents a firm's short-term profitability; MTB represents the market-to-book value ratio indicating a firm's liquidity; FR represents a firm's degree of franchising; INT represents a firm's degree of internationalization; TIME represents the number of weeks from the initial date of COVID-19 confirmation in the U.S.; SINDE X represents the Government Response Stringency Index which tracks travel restriction, trade patterns, school openings, social distancing, and other such measures; FISCAL_1 represents a dummy variable, assigning 1 for a week containing the first fiscal stimuli on March 6th and 0 for otherwise; FISCAL_2 represents a dummy variable, assigning 1 for a week containing the second fiscal stimuli from March 25th to 27th and 0 for otherwise; CB_1 represents a dummy variable, assigning 1 for a week containing the first circuit breaker on March 9th and 0 for otherwise; CB_2 represents a dummy variable, assigning 1 for a week containing the second circuit breaker on March 16th and 0 for otherwise.

To examine the impact of CSR rating on firms' stock performance, this study adopted an econometric analysis of panel data. Specifically, due to the nature of our data (i.e., panel data with firm-week observations), this study did not adopt the pooled ordinary least squares (OLS) estimations since it may provide biased results caused by unobserved effects (Wooldridge, 2010). Among various possible models to analyze panel data, this study employed a firm-level panel regression analysis to

consider such effects (Wooldridge, 2010). We chose panel data regression over the event study methodology since the spread of COVID-19 evolves over a day in a country and is not an event at a particular point in time. Specifically, this study employed a two-way fixed effects model by firm and week to thoroughly address firm and week heterogeneities when analyzing the panel dataset (Greene, 2008). Further, to avoid deflated standard errors and to mitigate any within-cluster correlations in the data, this study used robust standard errors in analyzing the panel dataset (Petersen, 2009).

3.3. Dependent variable

The main purpose of this study is to examine CSR's influence on firms' resilience to external shock (i.e., COVID-19). Since COVID-19 has brought extreme uncertainty regarding how deadly the disease is, stock markets became volatile according to the updated news of COVID-19 (Baker et al., 2020). Given that previous studies (e.g., Buyl et al., 2019; DesJardine et al., 2019) used a firm's stock performance as a proxy for resilience. Accordingly, we first examine the effect of COVID-19 on firms' stock returns. After retrieving information regarding the U.S. hospitality firms' stock price data, this study calculated weekly stock returns. Specifically, each firm's weekly stock return is calculated using dividend-adjusted closing prices on the last trading day of the week during the sample period from January 3rd to November 27th, 2020. Following the previous literature (Ramelli & Wagner, 2020), weekly stock returns were estimated by dividing the difference between the closing price on week_t and that on week_{t-1} by the price on week_{t-1}.

3.4. Main variables

3.4.1. COVID-19

we utilized weekly cumulative confirmed cases in the U.S. obtained from the WHO website (covid19.who.int) to calculate the growth rates of COVID-19 per week (Ding et al., 2020; Ramelli & Wagner, 2020). The equation for calculating the weekly growth rate of COVID-19 cases is as follows:

$$\text{COVID-19} = \log(1 + \# \text{confirmed cases in week}_t) - \log(1 + \# \text{confirmed cases in week}_{t-1})$$

3.4.2. CSR ratings

To assess differential sensitivity of stock price reactions to COVID-19 as a function of firms' pre-existing CSR ratings, we retrieved firms' monthly CSR ratings from CSRHub over the period from March 2019 to February 2020. It should be noted that providing consistent and relevant CSR ratings to a broad range of companies that originated from different nations and industries is challenging. For example, some sources might measure how a company regards its community by quantifying how much money it contributes to local charities. In contrast, others might consider if a company has a program that lets their employees dedicate to local charities or volunteer services affiliated with their community, or simply count the number of charity board membership held by the company's board members. These issues can become more problematic when it comes to applying different CSR reporting systems and guidelines from different countries since CSR performance might not be comparable. To minimize the above sources of bias and inconsistency, CSRHub uses a big data approach by using a large pool of data.¹ After aggregating and normalizing the information from various data sources, such as socially responsible investing firms, well-known indexes—including MSCI ESG KLD STATS, publications, crowdsources, and government agencies—CSRHub weighs each source based on the estimate of its credibility and value, and provides a data format that uses a single value ranging from 0 to 100 (with 100 being the most positive

¹ <https://www.csrhub.com>.

result possible) for each category/subcategory (CSRHub, 2020a). While the CSRHub’s assessment of firm CSR data takes into account 4 main dimensions: community, employee, environment, and governance, this study excludes CSR ratings in governance category considering that previous studies (e.g., Chintrakarn et al., 2016; Jo & Harjoto, 2012; Servaes & Tamayo, 2013) argued that most of activities on governance are related to how shareholders can motivate and control the managers effectively, which is not a main focus of CSR. Regardless, when we conducted a sensitivity analysis including governance, main results of this study remained the same.² The ratings of three subcategories for each category then are combined to produce the weighted average rating for each of three categories (i.e., Community [CSR_C], Employee [CSR_Em], and Environment [CSR_En], and the ratings of these three categories are summed up to calculate the weighted average overall rating (CSR_Total) for a company. Given a large number of data sources and proprietary methods to process data, the CSRHub database could be regarded as a representative of the general state of knowledge regarding the firms’ CSR performance and the best-available information that fits the objectives of this study.

3.5. Control variables

Following the previous literature collectively, this study included 10 control variables in the proposed model that can affect a hospitality firm’s stock performance and possibly confound the study results: size; leverage; profitability; stock liquidity; franchising; internationalization; and three policy dummies. A firm’s size (SIZE), measured by the log of total assets, was included as a control variable to control effects of scale economies, market power, and any effects from the different sizes of firms (Hitt et al., 2006). A firm’s leverage (LEV), measured by a debt-to-equity ratio, is also controlled for in the model. Leverage was considered a key financial condition that represents a firm’s liquidity (Brealey & Myers, 2003) and, thereby, can potentially influence stock returns (Korteweg, 2004). Also, this study controlled a firm’s profitability, measured by return on assets (ROA), as a firm with higher profitability is likely to achieve a better stock return (Allozi & Obeidat, 2016). In addition, given that previous literature (e.g., Fang et al., 2009) found that high stock liquidity positively influences financial performance by increasing the information content of market prices and performance-sensitive managerial compensation, this study included the liquidity model, measured by the market to book ratio (MTB), to control for its possible impact on stock returns.

We added controls for two industry-specific factors, namely, franchising (FR) and internationalization (INT). Specifically, we measured the degree of franchising by dividing the number of franchised units by the total number of units and the degree of internationalization by dividing the number of units operated in international markets by the total number of units (Park et al., 2017). Furthermore, we added a time variable (TIME) that indicates the number of weeks from the initial date of COVID-19 confirmation in the U.S to control for a potentially moving (i.e., decreasing or increasing) level of public anxiety about COVID-19 as time passes.

Lastly, this study added three variables to control for the effect of various policies on stock returns (Alfaro et al., 2020; Balajee et al., 2020). The first is a country-level index called “the Government Response Stringency Index” (SINDEX) developed at Oxford University. The SINDEX is a composite measure based on nine response indicators, (e.g., travel restriction, trade patterns, and school openings), rescaled to a value from 0 to 100 (100 = strictest response). Since the sample of the current study is U.S. tourism and hospitality firms whose businesses are based in the U.S. and strongly impacted by the U.S. government responses associated with COVID-19, the U.S. SINDEX was utilized although the SINDEX has reported daily indexes of each country from all

over the world since January 2020. The second control for policy is a coarse measure of fiscal stimulus (FISCAL) that consists of two dummy variables; FISCAL_1 = 1 when the fiscal stimulus was announced or confirmed during that week and = 0 otherwise. FISCAL_2 = 1 when the fiscal stimulus (3 of them) were announced or confirmed during that week and = 0 otherwise. The dummy variables are set upon which major fiscal policies were enacted. In specific, two major fiscal policies were considered in this study: (a) Coronavirus Preparedness and Response Supplemental Appropriation Act, 2020, which was signed into law on March 6th, (b) Coronavirus Aid, Relief, and Economic Security Act, which was signed into law from March 25th to March 27th. The third policy variable is a series of heightened measures called “Circuit Breakers” (CB) that aimed to halt panic-selling of securities in an exchange that would minimize the further spread of the negative effects of COVID-19. Like FISCAL, CB consists of two dummy variables; CB_1 = 1 when the circuit breaker was announced or confirmed during that week and = 0 otherwise. CB_2 = 1 when the circuit breaker was announced or confirmed during that week and = 0 otherwise. In specific, two major circuit breakers (i.e., March 13th and March 20th) were considered in this study.

4. Results

4.1. Descriptive statistics

Table 1 reports the descriptive statistics of variables included in the research model, obtained from 2,736 hospitality firm-week observations. RETURNS as our dependent variable had a mean of 0.0005, ranging from -0.705 to 0.838. That is, on average, weekly stock returns of the sampled hospitality firms declined by 0.05%, with the worst a decline of 70.5% and the best an increase of 83.8% during the sample period. The mean value of the weekly growth rate of COVID-19 was 0.341 with a standard deviation of 0.603, indicating that the weekly growth rate of COVID-19 was 34.1% on average. All CSR dimensions, including CSR_Total, CSR_C, CSR_Em, and CSR_En, showed enough variations for analyses. For example, CSR_Total, which is the average of all three CSR dimensions, had a mean of 46.082 and a standard deviation of 5.605.

Regarding pre-pandemic firm characteristics included as control variables, firm size (SIZE) had a mean of 7.441 with a standard deviation of 1.501, ranging from 4.181 to 10.532. Leverage ratio (LEV) had a mean of 3.393, having the maximum (minimum) value of 117.963 (-8.098), showing that the amount of debt, on average, was three times more than the amount of total equity. ROA, a proxy of pre-pandemic accounting performance, ranges from -0.117 to 0.340, while MTB, representing a firm’s stock liquidity, showed a range from -27.184 to

Table 1
Summary of descriptive statistics.

Variables	N	Mean	Std. Dev	Min	Max
RETURNS	2,736	0.0005	0.103	-0.705	0.838
COVID-19	2,736	0.341	0.603	0.000	2.538
CSR_Total	2,736	46.082	5.605	35.342	59.879
CSR_C	2,736	44.391	4.588	36.111	56.111
CSR_Em	2,736	46.992	6.229	38.528	64.028
CSR_En	2,736	46.864	9.584	29.000	69.194
SIZE	2,736	7.441	1.501	4.181	10.532
LEV	2,736	3.393	15.803	-8.098	117.963
ROA	2,736	0.053	0.075	-0.117	0.340
MTB	2,736	6.693	30.242	-27.184	223.817
FR	2,736	0.230	0.343	0.000	0.989
INT	2,736	0.186	0.290	0.000	1.000
TIME	2,736	24.500	13.856	1.000	48.000
SINDEX	2,736	54.534	26.736	0.000	75.460
FISCAL_1	2,736	0.022	0.145	0.000	1.000
FISCAL_2	2,736	0.020	0.140	0.000	1.000
CB_1	2,736	0.021	0.143	0.000	1.000
CB_2	2,736	0.021	0.143	0.000	1.000

² Results of this sensitivity analysis is available upon request.

223.817. Pertaining to the sampled hospitality firms' corporate strategies, the degree of franchising (FR) had a mean of 0.230 with a standard deviation of 0.343. In contrast, the degree of internationalization (INT) showed a mean of 0.186 and a standard deviation of 0.290. The number of weeks (TIME) from the initial date of COVID-19 confirmation in the U.S. was included in our research model as a continuous variable, ranging from 1 to 48. The Government Response Stringency Index (SINDEX) was included, showing a mean value of 54.534, ranging from 0.000 to 75.460. To control for governmental aids and regulations to alleviate the damage of COVID-19, several times of fiscal stimulus (FISCAL_1 and FISCAL_2) and circuit breakers (CB_1 and CB_2) were included as dummy variables.

Table 2 presents a summary of Pearson's correlations among variables. COVID-19 was negatively correlated with RETURNS at the 5% significance level. All CSR dimensions and other pre-pandemic firm characteristics, including SIZE, LEV, ROA, MTB, FR, and INT, showed an insignificant correlation with RETURNS. These insignificant correlations may be attributable to the fact that a binary relationship between RETURNS and each of all firm-specific variables did not control other interrelated factors with both RETURNS and CSR dimensions. As COVID-19 emerged abruptly, unrelated to firm characteristics, COVID-19 has insignificantly correlated with pre-pandemic firm characteristics as expected. On the other hand, COVID-19 was negatively correlated with TIME and SINDEX but positively associated with FISCAL_1, FISCAL_2, CB_1, and CB_2, respectively. In terms of CSR dimensions, all CSR dimensions are positively correlated with other pre-pandemic firm characteristics, such as SIZE, LEV, ROA, MTB, and INT.

4.2. Main analyses

The main analyses regarding the moderating effect of CSR dimensions on the relationship between COVID-19 and RETURNS were reported in Tables 3–6. Firstly, Table 3 reports the moderating role of CSR_Total by incorporating and averaging all CSR dimensions. As expected, COVID-19 impacts RETURNS at the 5% significance level, although coefficients vary depending on industries. For all sampled hospitality firms, including casinos, hotels, and restaurants, a 1% increase in COVID-19 led to a 7.738% decrease in RETURNS (p < 0.01). This study found that the moderating effect of CSR_Total on the relationship between COVID-19 and RETURNS is significant and positive. The result indicates that, on average, a hospitality firm's pre-pandemic CSR activities as of 2019 alleviated stock declines reacting to COVID-19. This study conducted the analyses again by dividing into three subsamples, depending on industries (i.e., casinos, hotels, and restaurants) to check the significant moderating role of CSR_Total more specifically. While the sample of restaurants showed the consistent results of the positive and significant moderating role of CSR_Total, there was an insignificant moderating effect in the hotel and casino industry. For control variables, SINDEX, FISCAL_1, FISCAL_2, CB_1, and CB_2 affected RETURNS positively and significantly, whereas TIME showed a negative impact on RETURNS in all analyses. Additionally, since the values of FR in the sample of casino firms were all 0 and the variation of FR was highly correlated with other dummy variables, such as FISCAL_1 and CB_1, FR was automatically eliminated by STATA owing to the multicollinearity for the casino sample.

Table 4 reports the moderating effect of CSR_C on the relationship between COVID-19 and RETURNS. The interaction between COVID19 and CSR_C showed a positive and significant impact on RETURNS, where the sample consists of total hospitality firms. However, there is no significant moderating effect of CSR_C at the 5% significance level in the subsample of casinos, hotels, and restaurants. Regarding control variables, pre-pandemic firm-level characteristics, such as SIZE, LEV, ROA, and INT, showed an insignificant impact on RETURNS during the sample period while TIME, SINDEX, FISCAL_1, FISCAL_2, CB_1, and CB_2 had a significant effect on RETURNS.

In Table 5, regarding the moderating role of CSR_Em, surprisingly,

Table 2
Summary of Pearson's correlations.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	
(1) RETURNS	1.000																		
(2) COVID-19	-0.227***	1.000																	
(3) CSR_Total	0.003	-0.000	1.000																
(4) CSR_C	0.020	0.000	0.69156***	1.000															
(5) CSR_Em	-0.011	-0.000	0.826***	0.504***	1.000														
(6) CSR_En	0.004	0.000	0.887***	0.405***	0.558***	1.000													
(7) SIZE	-0.009	-0.000	0.731***	0.349***	0.740***	0.636***	1.000												
(8) LEV	-0.004	0.000	0.133***	0.078***	0.069***	0.153***	0.124***	1.000											
(9) ROA	-0.015	-0.000	0.245***	0.219***	0.169***	0.217***	0.219***	0.984	1.000										
(10) MTB	-0.006	0.000	0.175***	0.093***	0.105***	0.195***	0.132***	0.182	0.010	1.000									
(11) FR	0.004	0.000	0.036	0.101***	-0.154***	0.110***	-0.145***	0.158***	0.262***	0.158***	1.000								
(12) INT	-0.013	-0.000	0.550***	0.323***	0.499***	0.487***	0.416***	0.104	0.256***	0.137***	-0.035	1.000							
(13) TIME	0.099***	-0.434**	0.000	-0.000	-0.000	-0.000	-0.000	0.000	-0.000	-0.000	-0.000	-0.000	1.000						
(14) SINDEX	0.144***	-0.207***	-0.000	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.678***	1.000					
(15) FISCAL_1	-0.154***	0.535***	0.009	0.006	0.011	0.007	0.008	0.000	0.001	0.001	-0.003	0.010	-0.154***	-0.180***	1.000				
(16) FISCAL_2	0.226***	0.337***	-0.009	-0.006	-0.011	-0.007	-0.008	-0.000	-0.001	-0.001	0.003	-0.010	-0.119***	0.097***	-0.021	1.000			
(17) CB_1	-0.240***	0.437***	-0.000	0.000	0.000	-0.000	-0.000	0.000	0.000	0.000	0.000	-0.000	-0.142***	-0.133***	-0.022	-0.021	1.000		
(18) CB_2	-0.200***	0.422***	-0.000	-0.000	0.000	-0.000	-0.000	0.000	0.000	-0.000	0.000	-0.000	-0.132***	0.069***	-0.022	-0.021	-0.021	1.000	

Notes: ***p < 0.01, **p < 0.05.

Table 3
The moderating role of CSR_Total.

VARIABLES	Hospitality firms (1)	Casinos (2)	Hotels (3)	Restaurants (4)	(5)	(6)	(7)	(8)
COVID-19	-7.738*** (1.443)	-7.814*** (1.433)	-9.448*** (3.090)	-9.576*** (3.033)	-7.172** (3.467)	-7.150** (3.474)	-7.499*** (1.774)	-7.597*** (1.758)
CSR_Total	-0.032 (0.025)	-0.033 (0.025)	0.014 (0.017)	0.013 (0.017)	0.003 (0.002)	0.003 (0.002)	-0.007 (0.005)	-0.007 (0.005)
COVID-19XCSR_Total		0.002*** (0.0006)		0.003 (0.002)		-0.001 (0.001)		0.002*** (0.001)
SIZE	0.278 (0.247)	0.278 (0.246)	0.008 (0.011)	0.007 (0.011)	0.003 (0.011)	0.003 (0.011)	0.029 (0.027)	0.029 (0.027)
LEV	-0.132 (0.124)	-0.132 (0.123)	-0.098 (0.120)	-0.098 (0.121)	0.003 (0.005)	0.003 (0.005)	-0.011 (0.008)	-0.013 (0.008)
ROA	0.278 (0.246)	-278 (0.245)	-4.120 (5.125)	-4.120 (5.23)	-0.445 (0.279)	-0.445 (0.280)	-0.032 (0.199)	-0.032 (0.199)
MTB	0.071 (0.066)	0.071 (0.066)	0.048 (0.062)	0.048 (0.062)	-0.001 (0.001)	-0.001 (0.001)	0.007 (0.005)	0.007 (0.005)
FR	0.463 (0.453)	0.463 (0.452)	-	-	0.007 (0.014)	0.007 (0.014)	0.031 (0.033)	0.031 (0.033)
INT	-2.139 (2.023)	-2.139 (2.013)	-0.228 (0.245)	-0.228 (0.246)	-0.018 (0.013)	-0.018 (0.013)	-0.088 (0.181)	-0.088 (0.180)
TIME	-0.006*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)	-0.009*** (0.003)	-0.0002 (0.004)	-0.0002 (0.004)	-0.008*** (0.002)	-0.008*** (0.002)
SINDEX	0.015*** (0.002)	0.015*** (0.002)	0.019*** (0.005)	0.019*** (0.005)	0.010** (0.005)	0.010** (0.005)	0.015*** (0.003)	0.015*** (0.003)
FISCAL_1	19.280*** (3.620)	19.280*** (3.600)	23.520*** (7.750)	23.520*** (7.585)	17.910** (8.705)	17.910** (8.717)	18.680*** (4.451)	18.680*** (4.423)
FISCAL_2	12.760*** (2.385)	12.760*** (2.372)	15.560*** (5.078)	15.560*** (4.967)	11.930** (5.761)	11.930** (5.769)	12.330*** (2.931)	12.330*** (2.913)
CB_1	16.060*** (3.036)	16.060*** (3.019)	19.620*** (6.493)	19.620*** (6.355)	14.990** (7.304)	14.990** (7.314)	15.530*** (3.732)	15.530*** (3.709)
CB_2	15.090*** (2.873)	15.090*** (2.857)	18.440*** (6.125)	18.440*** (5.993)	14.160** (6.931)	14.160** (6.940)	14.560*** (3.531)	14.560*** (3.509)
Constant	-0.342 (0.464)	-0.317 (0.461)	-0.405 (0.439)	-0.361 (0.441)	-0.141** (0.064)	-0.148** (0.065)	0.107 (0.075)	0.141 (0.074)
Wald chi2	2135.30***	2150.89***	1028.92***	1055.92***	809.34***	821.33***	1387.91***	1404.74***
Observations	2,736	2,736	432	432	574	574	1,728	1,728

Notes: Standard errors in parentheses; ***p < 0.01, **p < 0.05.

the sample of total hospitality firms showed no significant impact of an interaction term between COVID-19 and CSR_Em on RETURNS. The analyses with the sample of casinos, hotels, and restaurants provided consistent results of the insignificant moderating effect of CSR_Em. Same as findings of the moderating role of other CSR dimensions, firm-level characteristics (e.g., SIZE, LEV, MTB, and INT) showed an insignificant effect on RETURNS.

Next, Table 6 reports the moderating role of CSR_En, and the results obtained from the sample of total hospitality firms presented that there is a positive moderating effect of CSR_En. That is, on average, CSR_En acted as a signal that alleviated stock declines responding to COVID-19. Although we obtained the same result of the positive moderating impact of CSR_En with the sample of restaurants, there was no significant moderating impact of CSR_En when the sample is composed of firm-week observations of casinos and hotels.

5. Discussion and implications

This study's main purpose is to examine whether or not tourism and hospitality firms' CSR strategy can mitigate the negative impact of COVID-19 on their financial performance. To accomplish this goal, this study first examined the impact of COVID-19 on tourism and hospitality firms' financial performance, measured by stock returns. The study found that COVID-19 shows a negative impact on stock returns as hypothesized. Further, as the primary focus, the current study investigated the moderating impact of CSR performance on the relationship between COVID-19 and stock returns. The study analyzed sampled hotel, casino, and restaurant firms together and separately to examine the overall moderating effect of CSR and further industry specificity of CSR's

influence on firms' resilience to external shock (i.e., COVID-19). When all sampled firms were analyzed together, this study's findings provide general support for the "insurance-like" protection created by CSR (Godfrey, 2005; Godfrey et al., 2009) and a positive role of CSR to improve the prospects of a firm through managing various stakeholders based on the enlightened stakeholder theory (Jensen, 2002) even during an unprecedented global crisis like COVID-19. Moreover, this study provides meaningful findings in response to the literature suggesting industry idiosyncrasies in terms of the role of CSR and the need for comparative studies across different industry sectors (Brammer & Millington, 2005; Sweeney & Coughlan, 2008) by demonstrating different results across the three sub-sectors. Next, we discuss our findings and implications for each industry examined in this study.

First, analysis for the restaurant industry showed a positive moderating effect of CSR performance on the relationship between COVID-19 and stock returns. That is, CSR formulated resilience to the adverse impact of COVID-19 on a restaurant firm's stock returns. Given that the restaurant business has traditionally been known as a risky business (Parsa et al., 2005), previous studies have investigated contingencies that are related to risk in the restaurant industry (e.g., Park et al., 2017; Kim & Kim, 2014). According to our study's results, composite CSR performance in all three dimensions and CSR dimension in the environment category played a role in the resilience of restaurant firms reacting to COVID-19, suggesting that investment in CSR alleviates the negative impact of COVID-19 on their stock returns as proposed by H2. A possible explanation for the nonsignificant moderating effect of CSR in the other CSR dimensions could be as follows. CSR in the employee category contributes to employee commitment to their organization, improving job satisfaction, retention, and, consequently, firms'

Table 4
The moderating role of CSR_C.

VARIABLES	Hospitality firms		Casinos		Hotels		Restaurants	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COVID-19	-7.738*** (1.443)	-7.836*** (1.419)	-9.448*** (3.090)	-9.599*** (2.999)	-7.172** (3.467)	-7.274** (3.411)	-7.499*** (1.774)	-7.585*** (1.748)
CSR_C	0.008 (0.006)	0.007 (0.006)	0.012 (0.015)	0.011 (0.015)	0.001 (0.001)	0.001 (0.001)	-0.009 (0.007)	-0.010 (0.007)
COVID-19XCSR_C		0.002** (0.001)		0.003 (0.002)		0.002 (0.0014)		0.002 (0.0012)
SIZE	-0.099 (0.057)	-0.099 (0.056)	-0.035 (0.050)	-0.035 (0.050)	0.010 (0.008)	0.010 (0.008)	0.038 (0.034)	0.038 (0.034)
LEV	0.050 (0.026)	0.0500 (0.026)	-0.023 (0.035)	-0.023 (0.035)	0.001 (0.004)	0.001 (0.004)	-0.014 (0.010)	-0.014 (0.009)
ROA	-0.086 (0.161)	-0.086 (0.161)	-2.044 (2.759)	-2.044 (2.750)	-0.354 (0.282)	-0.353 (0.280)	-0.143 (0.167)	-0.143 (0.167)
MTB	-0.027 (0.014)	-0.027 (0.014)	0.014 (0.023)	0.014 (0.023)	-0.0003 (0.0008)	-0.0003 (0.0008)	0.007 (0.005)	0.007 (0.005)
FR	-0.219** (0.111)	-0.219** (0.110)	-	-	0.007 (0.014)	0.007 (0.014)	0.074 (0.058)	0.074 (0.058)
INT	1.008 (0.557)	1.008 (0.554)	0.132 (0.199)	0.132 (0.198)	-0.016 (0.013)	-0.015 (0.013)	-0.195 (0.245)	-0.195 (0.244)
TIME	-0.006*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)	-0.009*** (0.003)	-0.0002 (0.004)	-0.0002 (0.004)	-0.008*** (0.002)	-0.008*** (0.002)
SINDEX	0.015*** (0.002)	0.015*** (0.002)	0.019*** (0.005)	0.019*** (0.005)	0.010** (0.005)	0.010** (0.005)	0.015*** (0.003)	0.015*** (0.003)
FISCAL_1	19.280*** (3.620)	19.280*** (3.558)	23.520*** (7.750)	23.520*** (7.517)	17.910** (8.705)	17.910** (8.562)	18.680*** (4.451)	18.680*** (4.385)
FISCAL_2	12.760*** (2.385)	12.760*** (2.344)	15.560*** (5.078)	15.560*** (4.924)	11.930** (5.761)	11.940** (5.667)	12.330*** (2.931)	12.330*** (2.888)
CB_1	16.060*** (3.036)	16.060*** (2.984)	19.620*** (6.493)	19.620*** (6.298)	14.990** (7.304)	14.990** (7.184)	15.530*** (3.732)	15.530*** (3.677)
CB_2	15.090*** (2.873)	15.090*** (2.824)	18.440*** (6.125)	18.440*** (5.940)	14.160** (6.931)	14.160** (6.818)	14.560*** (3.531)	14.560*** (3.479)
Constant	0.281 (0.155)	0.315** (0.154)	-0.159 (0.146)	-0.108 (0.154)	-0.134** (0.063)	-0.102 (0.064)	0.152 (0.099)	0.181 (0.098)
Wald chi2	2135.69***	2172.40***	1028.74***	1075.43***	809.28***	820.53***	1388.16***	1409.72***
Observations	2,736	2,736	432	432	574	574	1,728	1,728

Notes: Standard errors in parentheses; ***p < 0.01, **p < 0.05.

profitability by reducing recruitment and training costs (Brammer et al., 2006). However, considering that many restaurants during the pandemic switched to takeout and delivery only or changed their dining mode by limiting indoor occupancy capacity, restaurants do not require a large number of employees during the pandemic. In that sense, shareholders and potential investors may put less importance on pre-pandemic CSR activities in the employee category during the pandemic. Also, CSR in the community category, including charitable donations, and support for local development (e.g., housing or education) may not be viewed as a core CSR practice that may have direct, immediate cost-savings or performance-enhancing effect for restaurant operations (Lee et al., 2013). Especially in a situation where a restaurant firm needs to cover up significant financial loss triggered by restricted business operations during the pandemic, the viewpoint seems valid.

Second, for the casino industry, in line with previous studies that did not find any significant direct relationship between CSR activities and firm performance (Kang et al., 2010; Lee & Park, 2009), this study found that CSR performance in all three dimensions did not play a significant role in mitigating stock declines of casino firms in response to COVID-19. Due to the nature of their core business, namely gambling, the casino industry has been regarded as socially irresponsible, regardless of how much the industry tries to create different expectations or reactions from the public (Lee & Park, 2009). CSR activities in the casino industry have been rapidly growing and evolving over the past decades, for example, by implementing charitable giving and pro-social volunteer activities to enhance a firm's social image. However, the results of this study proved that the public and markets do not see added values from such investments by casino firms, especially regarding the potential effects of CSR on firm resilience to stock declines reacting to

COVID-19. A possible reason for the nonsignificant effects could be that CSR practices in this sector are more likely to be fueled by governmental regulations, not by their own values and strategies due to the inherent industry characteristics (Strauss, 2015), and the evaluation of such practices by investors could have inconsistencies and ambiguities from the value-adding perspective (Yang et al., 2020). In this respect, investors may not set a high value upon firms' CSR practices as a buffer for reducing the negative impact of COVID-19. However, this possibility should be further explored in the future for more explicit evidence.

Third, for the hotel industry, the findings do not support the proposed hypothesis (H2) for CSR's positive moderating effect. Rather, the findings suggest a non significant moderating effect of all three CSR dimensions (community, employee, and environment). One possible reason for the nonsignificant findings may be that the hotel business's economic prospects are more dire than other examined sub-sectors from the investor's perspective. This is because the hotel business heavily relies on visitors who have to travel to the subject hotel when the global travel restrictions due to the pandemic led to the unprecedented decline in the total number of travelers. Although many restaurants have been greatly suffering from the pandemic, they could still serve local customers, utilizing curbside pick-up and delivery (Costa, 2020). According to National Restaurant Association (2020), the restaurant industry's revenue for the third quarter of 2020 was \$162.3 billion leading to a 16.43% decrease, compared to \$194.2 billion for the third quarter of 2019. On the other hand, Coldwell Banker Richard Ellis (CRBE) reported that the hotel industry experienced a 67.7% and 54.4% RevPAR drop in the second and third quarter of 2020, respectively, compared to those in 2019 (CRBE, 2020). Thus, investors and financial markets may have factored this perspective in their equity pricing, which may be too much

Table 5
The moderating role of CSR_Em.

VARIABLES	Hospitality firms		Casinos		Hotels		Restaurants	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COVID-19	-7.738*** (1.443)	-7.769*** (1.440)	-9.448*** (3.090)	-9.575*** (3.111)	-7.172** (3.467)	-7.150** (3.478)	-7.499*** (1.774)	-7.547*** (1.764)
CSR_Em	-0.002 (0.002)	-0.003 (0.002)	0.013 (0.015)	0.012 (0.015)	-0.004 (0.0023)	-0.004 (0.0022)	-0.014 (0.010)	-0.014 (0.010)
COVID-19XCSR_Em		0.0007 (0.0005)		0.003 (0.002)		-0.0004 (0.0007)		0.001 (0.0009)
SIZE	-0.024 (0.025)	-0.024 (0.025)	0.036 (0.038)	0.036 (0.038)	0.010 (0.008)	0.001 (0.008)	0.024 (0.024)	0.024 (0.024)
LEV	0.013 (0.018)	0.013 (0.018)	-0.097 (0.119)	-0.097 (0.119)	-0.006 (0.005)	-0.006 (0.005)	-0.020 (0.014)	-0.020 (0.014)
ROA	-0.038 (0.145)	-0.038 (0.145)	-3.383 (4.335)	-3.383 (4.337)	0.376 (0.562)	0.376 (0.559)	0.319 (0.407)	0.319 (0.407)
MTB	-0.007 (0.009)	-0.007 (0.009)	0.042 (0.055)	0.042 (0.055)	0.0008 (0.001)	0.0008 (0.001)	0.010 (0.007)	0.010 (0.007)
FR	-0.068 (0.073)	-0.068 (0.073)	-	-	0.0005 (0.015)	0.0006 (0.015)	-0.006 (0.028)	-0.006 (0.028)
INT	0.413 (0.290)	0.413 (0.290)	-0.188 (0.196)	-0.188 (0.197)	-0.006 (0.014)	-0.007 (0.014)	0.275 (0.180)	0.275 (0.180)
TIME	-0.006*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)	-0.009*** (0.003)	-0.0002 (0.004)	-0.0002 (0.004)	-0.008*** (0.002)	-0.008*** (0.002)
SINDEX	0.015*** (0.002)	0.015*** (0.002)	0.019*** (0.005)	0.019*** (0.005)	0.010** (0.005)	0.010** (0.005)	0.015*** (0.003)	0.015*** (0.003)
FISCAL_1	19.280*** (3.620)	19.280*** (3.613)	23.520*** (7.750)	23.520*** (7.798)	17.910** (8.705)	17.910** (8.734)	18.680*** (4.451)	18.680*** (4.426)
FISCAL_2	12.760*** (2.385)	12.760*** (2.380)	15.560*** (5.078)	15.560*** (5.108)	11.930** (5.761)	11.930** (5.780)	12.330*** (2.931)	12.330*** (2.915)
CB_1	16.060*** (3.036)	16.060*** (3.029)	19.620*** (6.493)	19.620*** (6.533)	14.990** (7.304)	14.990** (7.328)	15.530*** (3.732)	15.530*** (3.711)
CB_2	15.090*** (2.873)	15.090*** (2.867)	18.440*** (6.125)	18.440*** (6.162)	14.160** (6.931)	14.160** (6.954)	14.560*** (3.531)	14.560*** (3.512)
Constant	0.255 (0.150)	0.266 (0.150)	-0.639 (0.722)	-0.596 (0.720)	0.107 (0.131)	0.097 (0.129)	0.436 (0.294)	0.453 (0.294)
Wald chi2	2135.40***	2142.73***	1028.90***	1026.36***	809.25***	838.37***	1388.27***	1397.63***
Observations	2,736	2,736	432	432	574	574	1,728	1,728

Notes: Standard errors in parentheses; ***p < 0.01, **p < 0.05.

for hotels to mitigate the negative effect of COVID-19 from their engagement in CSR strategy.

In addition, CSR efforts in the hotel sector might not be viewed as a key strategy for shareholders and investors, specifically during the pandemic. Holcomb et al. (2007) found that 80 percent of the hotel firms analyzed reported socially responsible activities relating to some form of charitable donations. That is, non-core activities encompass outsourcing, donations, and capacity-building activities tend to be favored in the hotel industry. This finding could bring a controversy that CSR activities as non-core activities in this sector might be condemnable by investors, especially during an economic downturn from Friedman's (1970) perspective. Friedman's trade-off theory posits that firms should utilize all resources of their core business to maximize profitability. Especially during the pandemic, based on Friedman's trade-off theory, the idea that CSR activities increase profit based on the premise that firms balance the economy and stabilize prices for consumers while also creating new employment opportunities for the public might not be relevant to handle financial distress caused by COVID-19 for the hotel industry. Given that previous studies highlighted that the hotel industry is classified as highly capital and labor-intensive and thereby is very restricted in terms of finding turnaround options during an economic downturn compared to other industries in the hospitality sector (Guillet & Mattila, 2010; Reich, 1993), investment in CSR activities could be perceived to be an ineffective strategy since it requires firms to allocate resources on this matter, which consequently increases costs and negatively influences bottom line profits (Friedman, 1970). However, it should be clearly noted that these speculations need further empirical confirmation in the future, thus encouraging tourism and hospitality researchers to explore whether these explanations hold.

Our findings provide managerial implications to the three examined industries in coping with the current pandemic. According to the findings, restaurants are encouraged to make consistent investments in CSR not only for building their reputation and creating competitive advantages during normal times but also for improving their resilience in reacting to a crisis like COVID-19. Considering that CSR investment in hotels and casinos does not seem to play a significant role in mitigating the negative effect of COVID-19, hotels and casinos are recommended to re-evaluate their current CSR strategy and attempt to develop their CSR programs more strategic (Chandler, 2017) by linking CSR activities to their core business operations that may contribute to creating a competitive advantage, which positively influences investor perceptions of firm value in a more meaningful manner.

To our current knowledge, this study is one of the first attempts to explore whether stock returns reacting to COVID-19 differ, hinging on a firm's corporate social responsibility (CSR) activities in the tourism and hospitality industry context. While a recent study by Qiu et al. (2020) examined the effect of engaging in CSR activities on hospitality firms' stock returns in the Chinese stock market, there are critical differences between Qiu et al. (2020) and our study. First, they analyzed Chinese hospitality firms while the current study examines hospitality firms in the U.S. Considering unique characteristics of the Chinese economy, our findings in the U.S. setting will clearly provide additional value and implications. Second, Qiu et al. focused only on those CSR activities during the pandemic and related to the pandemic, and accordingly, their examined CSR activities were heavily about charitable givings and being health-related whereas this study investigates the effect of comprehensive CSR activities including various dimensions of CSR (i.e., communities, employees and environments) that had been already formed

Table 6
The moderating role of CSR_En.

VARIABLES	Hospitality firms		Casinos		Hotels		Restaurants	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
COVID-19	-7.738*** (1.443)	-7.779*** (1.441)	-9.448*** (3.090)	-9.513*** (3.028)	-7.172** (3.467)	-7.148** (3.459)	-7.499*** (1.774)	-7.570*** (1.775)
CSR_En	0.005 (0.004)	0.005 (0.004)	0.018 (0.022)	0.018 (0.022)	0.001 (0.001)	0.0016 (0.0009)	-0.004 (0.003)	-0.004 (0.003)
COVID-19XCSR_En		0.001** (0.0004)		0.001 (0.001)		-0.001 (0.001)		0.0015*** (0.0005)
SIZE	-0.117 (0.070)	-0.117 (0.069)	0.031 (0.032)	0.031 (0.033)	-0.002 (0.012)	-0.001 (0.011)	0.028 (0.026)	0.028 (0.026)
LEV	0.057 (0.031)	0.057 (0.030)	-0.212 (0.257)	-0.212 (0.258)	0.003 (0.004)	0.003 (0.004)	-0.008 (0.005)	-0.008 (0.005)
ROA	-0.154 (0.194)	-0.154 (0.194)	-8.289 (10.230)	-8.289 (10.260)	-0.220 (0.306)	-0.223 (0.306)	-0.082 (0.181)	-0.082 (0.182)
MTB	-0.031 (0.017)	-0.031 (0.017)	0.107 (0.133)	0.107 (0.133)	-0.001 (0.001)	-0.001 (0.001)	0.004 (0.003)	0.004 (0.003)
FR	-0.220** (0.111)	-0.220** (0.111)	-	-	0.005 (0.014)	0.005 (0.014)	0.023 (0.031)	0.023 (0.030)
INT	1.218 (0.704)	1.218 (0.700)	-0.827 (0.966)	-0.827 (0.969)	-0.017 (0.013)	-0.017 (0.013)	-0.142 (0.212)	-0.142 (0.211)
TIME	-0.006*** (0.002)	-0.006*** (0.002)	-0.009*** (0.003)	-0.009*** (0.003)	-0.0002 (0.004)	-0.0002 (0.004)	-0.008*** (0.002)	-0.008*** (0.002)
SINDEX	0.015*** (0.002)	0.015*** (0.002)	0.019*** (0.005)	0.019*** (0.005)	0.010** (0.005)	0.010** (0.005)	0.015*** (0.003)	0.015*** (0.003)
FISCAL_1	19.280*** (3.620)	19.280*** (3.616)	23.520*** (7.750)	23.520*** (7.593)	17.910** (8.705)	17.910** (8.680)	18.680*** (4.451)	18.680*** (4.453)
FISCAL_2	12.760*** (2.385)	12.760*** (2.382)	15.560*** (5.078)	15.560*** (4.972)	11.930** (5.761)	11.930** (5.744)	12.330*** (2.931)	12.330*** (2.933)
CB_1	16.060*** (3.036)	16.060*** (3.032)	19.620*** (6.493)	19.620*** (6.361)	14.990** (7.304)	14.990** (7.283)	15.530*** (3.732)	15.530*** (3.734)
CB_2	15.090*** (2.873)	15.090*** (2.870)	18.440*** (6.125)	18.440*** (5.998)	14.160** (6.931)	14.160** (6.910)	14.560*** (3.531)	14.560*** (3.533)
Constant	0.513 (0.276)	0.527 (0.274)	-0.437 (0.478)	-0.414 (0.480)	-0.051 (0.061)	-0.059 (0.060)	0.001 (0.069)	0.0255 (0.068)
Wald chi2	2135.14***	2143.60***	1028.83***	1057.49***	809.27***	810.38***	1388.09***	1394.69***
Observations	2,736	2,736	432	432	574	574	1,728	1,728

Notes: Standard errors in parentheses; ***p < 0.01, **p < 0.05.

before the pandemic. Our focal point is not about the effect of specific CSR activities during the pandemic, but the effect of hospitality firms' general reputation about their CSR strategy that had been already built prior to the pandemic. Furthermore, the adopted methodological model (i.e., a difference-in-differences model) of Qiu et al. is different from ours and is not likely to be appropriate for measuring the continuous impact of COVID-19, the context of the current study. Since the current study endeavors to examine the continuous mean effect of COVID-19 and the moderating effect of CSR activities with a more extensive sample period, this study's results will make unique contributions to the tourism and hospitality literature.

In addition, given that the tourism and hospitality industry is one of the most disrupted industries from the impact of COVID-19, this study's results are expected to make meaningful contributions to the literature by explaining the buffering effect of CSR during the pandemic. Further, as the previous literature suggested that the various aspects of CSR must be examined separately to achieve an accurate picture of their impacts on returns (e.g., Brammer et al., 2006), this study responded to a further question which CSR dimensions, namely Community, Employee, and Environment, are more likely to generate resilience of firms reacting to COVID-19 shock. That is, this study explored how investors reward socially responsible firms based on the three CSR dimensions. Furthermore, the study's idiosyncratic findings across three different sub-sectors of the tourism and hospitality industry add value to the extant literature, reaffirming the necessity of recognizing heterogeneity within the tourism and hospitality industry.

Despite the contributions mentioned above, this study has a few limitations that also serve as future research opportunities. Firstly, since

this study was conducted using publicly-traded U.S. tourism and hospitality firms, and only those firms that appear in the CSRHub database, generalizability across countries or industry sectors may be limited. Secondly, considering that COVID-19 is triggering a global economic crisis with differing reactions from different countries, an investigation of non-US firms in a comparative manner across different countries may reveal idiosyncratic impacts of tourism and hospitality firms' CSR investment on the negative shock from COVID-19 in a more comprehensive manner. Thirdly, although stock returns are among the best performance measures available to assess resilience in the ongoing COVID-19 pandemic as well as general crises, a more comprehensive data set covering a longer period after the pandemic will likely provide new insight about how a firm responded to the pandemic regarding its CSR engagement. In this regard, future studies are encouraged to extend the data and investigate the longer-term impact of COVID-19 and the moderating role of CSR. Next, due to limitations to available data and our key interest in changes in stock reactions to COVID-19, this study did not consider the impact of COVID-19 shock in the private sector of the hospitality industry. In this respect, future studies are encouraged to investigate CSR's role in relation to the impact of COVID-19 shock in the private lodging sector to provide a complete picture of the entire tourism and hospitality industry. Lastly, while this study focused on COVID-19 as one particular case of external crises in investigating the resilient role of CSR activities of the U.S. tourism and hospitality firms, future studies are encouraged to examine the same issue in the context of other external crises (e.g., financial crises, climate risks, and natural disasters) which will enhance the external validity of the "insurance-like" protection role of CSR engagement on the relationship between external crises and firm performance.

Credit author statement

Jihwan Yeon, Conceptualization, Research design, Methodology, Data collection, Writing – original draft. Hyoung Ju Song, Research design, Data collection, Methodology & Formal analysis, Writing – original draft. Heyao (Chandler) Yu, Conceptualization, Hypotheses development, Writing – original draft, Writing – review & editing. Yue Vaughan Conceptualization, Methodology, Data collection, Writing – review & editing. Seoki Lee, Supervision, Research design, Writing – original draft, Writing – review & editing.

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References

- Albuquerque, R., Koskinen, Y., Yang, S., & Zhang, C. (2020). Resiliency of environmental and social stocks: An analysis of the exogenous COVID-19 market crash. *The Review of Corporate Finance Studies*, 9(3), 593–621.
- Alfaro, L., Chari, A., Greenland, A. N., & Schott, P. K. (2020). *Aggregate and firm-level stock returns during pandemics, in real time*. National Bureau of Economic Research.
- Allozi, N. M., & Obeidat, G. S. (2016). The relationship between the stock return and financial indicators (profitability, leverage): An empirical study on manufacturing companies listed in Amman Stock Exchange. *Journal of Social Sciences*, 5(3), 408–424.
- Aupperle, K. E., Carroll, A. B., & Hatfield, J. D. (1985). An empirical examination of the relationship between corporate social responsibility and profitability. *Academy of Management Journal*, 28(2), 446–463.
- Baker, S. R., Bloom, N., Davis, S. J., Kost, K., Sammon, M., & Viratyosin, T. (2020). The unprecedented stock market reaction to COVID-19. *The Review of Asset Pricing Studies*, 10(4), 742–758.
- Balajee, A., Tomar, S., & Udupa, G. (2020). COVID-19. *Fiscal stimulus, and credit ratings*. Available at SSRN: Indian School of Business. <https://doi.org/10.2139/ssrn.3577115>
- Barich, H., & Kotler, P. (1991). A framework for marketing image management. *MIT Sloan Management Review*, 32(2), 94.
- Barnett, M. L., & Salomon, R. M. (2012). Does it pay to be really good? Addressing the shape of the relationship between social and financial performance. *Strategic Management Journal*, 33(11), 1304–1320.
- Bernanke, B. (2020). Ben bernanke on COVID-19 downturn. *Marketplace*. <https://www.marketplace.org/2020/03/23/former-fed-chair-bernanke-covid19-downturn/>.
- Brammer, S., Brooks, C., & Pavelin, S. (2006). Corporate social performance and stock returns: UK evidence from disaggregate measures. *Financial Management*, 35(3), 97–116.
- Brammer, S., & Millington, A. (2005). Corporate reputation and philanthropy: An empirical analysis. *Journal of Business Ethics*, 61(1), 29–44.
- Buyl, T., Boone, C., & Wade, J. B. (2019). CEO narcissism, risk-taking, and resilience: An empirical analysis in US commercial banks. *Journal of Management*, 45(4), 1372–1400.
- Chintrakarn, P., Jiraporn, P., Kim, J. C., & Kim, Y. S. (2016). The effect of corporate governance on corporate social responsibility. *Asia-Pacific Journal of Financial Studies*, 45(1), 102–123.
- Costa, M. (2020). *Hotel restaurants turn to grab and go for service during coronavirus*.
- Crbe. (2020). U.S. Hotel figures Q3, 2020. <https://www.cbre.us/research-and-reports/US-Hotel-Figures-Q3-2020>.
- CSRHub. (2020a). The CSRHub ratings methodology. <https://esg.csrhub.com/csrhub-ratings-methodology>.
- DesJardine, M., Bansal, P., & Yang, Y. (2019). Bouncing back: Building resilience through social and environmental practices in the context of the 2008 global financial crisis. *Journal of Management*, 45(4), 1434–1460.
- Ding, W., Levine, R., Lin, C., & Xie, W. (2020). Corporate immunity to the COVID-19 pandemic (No. w27055). *National Bureau of Economic Research*.
- Fang, V. W., Noe, T. H., & Tice, S. (2009). Stock market liquidity and firm value. *Journal of Financial Economics*, 94(1), 150–169.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.
- Friedman, M. (September 13, 1970). (1970). The social responsibility of business is to increase its profits. *New York Times Magazine*.
- Godfrey, P. C. (2005). The relationship between corporate philanthropy and shareholder wealth: A risk management perspective. *Academy of Management Review*, 30(4), 777–798.
- Godfrey, P. C., Merrill, C. B., & Hansen, J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal*, 30(4), 425–445.
- Greene, W. H. (2008). *Econometric analysis* (6th ed.). Upper Saddle River: Pearson.
- Guillet, B. D., & Mattila, A. S. (2010). A descriptive examination of corporate governance in the hospitality industry. *International Journal of Hospitality Management*, 29(4), 677–684.
- Guiso, L., Paola, S., & Luigi, Z. (2008). Trusting the stock market. *The Journal of Finance*, 63(6), 2557–2600.
- Gursoy, D., & Chi, C. G. (2020). Effects of COVID-19 pandemic on hospitality industry: Review of the current situations and a research agenda. *Journal of Hospitality Marketing & Management*, 29(5), 527–529.
- Hitt, M. A., Tihanyi, L., Miller, T., & Connelly, B. (2006). International diversification: Antecedents, outcomes, and moderators. *Journal of Management*, 32(6), 831–867.
- Holcomb, J. L., Upchurch, R. S., & Okumus, F. (2007). Corporate social responsibility: What are top hotel companies reporting? *International Journal of Contemporary Hospitality Management*, 19(6), 461–475.
- Huang, A., Makridis, C., Baker, M., Medeiros, M., & Guo, Z. (2020). Understanding the impact of COVID-19 intervention policies on the hospitality labor market. *International Journal of Hospitality Management*, 91, 102660.
- Jensen, M. C. (2002). Value maximization, stakeholder theory, and the corporate objective function. *Business Ethics Quarterly*, 12(2), 235–256.
- Jia, Y., Gao, X., & Julian, S. (2020). Do firms use corporate social responsibility to insure against stock price risk? Evidence from a natural experiment. *Strategic Management Journal*, 41(2), 290–307.
- Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics*, 106(1), 53–72.
- Jung, H. S., Jung, Y. S., & Yoon, H. H. (2020). COVID-19: The effects of job insecurity on the job engagement and turnover intent of deluxe hotel employees and the moderating role of generational characteristics. *International Journal of Hospitality Management*, 92, 102703.
- Kang, K. H., Lee, S., & Huh, C. (2010). Impacts of positive and negative corporate social responsibility activities on company performance in the hospitality industry. *International Journal of Hospitality Management*, 29(1), 72–82.
- Kim, M., & Kim, Y. (2014). Corporate social responsibility and shareholder value of restaurant firms. *International Journal of Hospitality Management*, 40, 120–129.
- Klein, J., & Dawar, N. (2004). Corporate social responsibility and consumers' attributions and brand evaluations in a product-harm crisis. *International Journal of Research in Marketing*, 21(3), 203–217.
- Korteweg, A. G. (2004). Financial leverage and expected stock returns: Evidence from pure exchange offers. Available at SSRN. <http://ssrn.com/abstract=597922>.
- Kunda, Z. (1999). *Social cognition: Making sense of people*. USA: MIT press.
- Lee, S., & Park, S. Y. (2009). Do socially responsible activities help hotels and casinos achieve their financial goals? *International Journal of Hospitality Management*, 28(1), 105–112.
- Lee, S., Seo, K., & Sharma, A. (2013). Corporate social responsibility and firm performance in the airline industry: The moderating role of oil prices. *Tourism Management*, 38, 20–30.
- Lins, K. V., Servaes, H., & Tamayo, A. (2017). Social capital, trust, and firm performance: The value of corporate social responsibility during the financial crisis. *The Journal of Finance*, 72(4), 1785–1824.
- McWilliams, A., & Siegel, D. (2000). Corporate social responsibility and financial performance: Correlation or misspecification? *Strategic Management Journal*, 21(5), 603–609.
- National Restaurant Association. (2020). Restaurant sales growth slowed significantly in September. Retrieved from. <https://restaurant.org/articles/news/restaurant-sales-growth-slowed-significantly>.
- Park, S., Song, S., & Lee, S. (2017). Corporate social responsibility and systematic risk of restaurant firms: The moderating role of geographical diversification. *Tourism Management*, 59, 610–620.
- Parsa, H. G., Self, J. T., Njite, D., & King, T. (2005). Why restaurants fail. *Cornell Hotel and Restaurant Administration Quarterly*, 46(3), 304–322.
- Petersen, M. A. (2009). Estimating standard errors in finance panel data sets: Comparing approaches. *Review of Financial Studies*, 22(1), 435–480.
- Qiu, S. C., Jiang, J., Liu, X., Chen, M. H., & Yuan, X. (2020). Can corporate social responsibility protect firm value during the COVID-19 pandemic? *International Journal of Hospitality Management*, 102759.
- Ramelli, S., & Wagner, A. F. (2020). Feverish stock price reactions to COVID-19. *The Review of Corporate Finance Studies*, 9(3), 622–655.
- Reich, A. Z. (1993). Applied economics of hospitality production: Reducing costs and improving the quality of decisions through economic analysis. *International Journal of Hospitality Management*, 12(4), 337–352.
- Sapienza, P., & Zingales, L. (2012). A trust crisis. *International Review of Finance*, 12(2), 123–131.
- Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science*, 59(5), 1045–1061.
- Sharma, A., & Nicolau, J. L. (2020). An open market valuation of the effects of COVID-19 on the travel and tourism industry. *Annals of Tourism Research*, 83, 102990.
- Sohn, Y. J., & Lariscy, R. W. (2015). A “buffer” or “boomerang?”—the role of corporate reputation in bad times. *Communication Research*, 42(2), 237–259.
- Song, H. J., Yeon, J., & Lee, S. (2020). Impact of the COVID-19 pandemic: Evidence from the US restaurant industry. *International Journal of Hospitality Management*, 92.
- Strauss, J. R. (2015). *Challenging corporate social responsibility: Lessons for public relations from the casino industry*. Routledge.
- Sweeney, L., & Coughlan, J. (2008). Do different industries report corporate social responsibility differently? An investigation through the lens of stakeholder theory. *Journal of Marketing Communications*, 14(2), 113–124.
- Wang, Q., Dou, J., & Jia, S. (2016). A meta-analytic review of corporate social responsibility and corporate financial performance: The moderating effect of contextual factors. *Business & Society*, 55(8), 1083–1121.
- Wooldridge, J. M. (2010). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.
- World Health Organization. (2020). WHO coronavirus disease (COVID-19) dashboard. <https://covid19.who.int>.

Yang, F. X., Ren, L., & Lau, V. M. C. (2020). An original sin of casino hotels? Consequences of CSR misfit and the remedies. *International Journal of Hospitality Management*, 87, 102500.

Zenker, S., & Kock, F. (2020). The coronavirus pandemic—A critical discussion of a tourism research agenda. *Tourism Management*, 81, 104164.

Zheng, D., Luo, Q., & Ritchie, B. W. (2020). Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic 'travel fear'. *Tourism Management*, 104261.



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