Research note

Corporate social responsibility and customer satisfaction among US publicly traded hotels and restaurants

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ABSTRACT

This study, by performing a path regression analysis, examines a mediating effect of customer satisfaction between corporate social responsibility (CSR) activities and firm value for US hotels and restaurants. Further, the study differentiates positive and negative CSR activities in the analysis. Findings suggest that the customer satisfaction does not play a role of a mediator between the two factors for both hotels and restaurants.

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1. Introduction

Corporate social responsibility (CSR) has emerged as an intensely relevant issue in the corporate world in the past decade, and the hospitality industry has been actively involving in the issue in various ways. Hotels have implemented numerous green practices along with participating in green certificate programs, such as LEED (Leadership in Energy and Environmental Design) certification. Starwood even developed a new eco-friendly chain, ELEMENT Hotels, in which properties must obtain LEED certification (Las Vegas Now, 2008). Restaurants also have implemented environmentally sensitive business practices. For example, Yum Brands is converting its fryer oil into biodiesel fuel and reducing energy consumption (Elan, 2008).

In all these socially responsible efforts by the hospitality industry, hospitality researchers began to wonder about financial impacts of such CSR activities on firm performance. Rodriguez and Cruz (2007) found a positive impact from CSR activities of hotels on their accounting performance (i.e., return on assets) in Spain by utilizing a survey method. Lee and Park (2009) examined the relationship between CSR investment and firm performances (accounting and value performances) for US hotels and casinos, and found a positive relationship for hotels, but no relationship for casinos.

While these studies provide valuable insight, they aggregated CSR activities as one measure, and this practice could be problematic because various components, different in nature, may exist in the aggregated CSR measure. According to the positivity and negativity effects, positive and negative activities may have different magnitudes of impacts on outcomes. Studies on impression formation and information integration demonstrate that an impression does not reflect the entirety of different attributes to the same extent, but tend to be disproportionately influenced by negative characteristics of the target (Martijn et al., 1992). This tendency of over-emphasizing negative information is often referred to as the negativity effect (for example, Wojciszke et al., 1993). On the other hand, Taylor and Koivumaki (1976) examined how people perceive themselves versus others, and found that people were seen as causing positive behaviors, and situational factors were regarded as causing negative behaviors. This tendency is called the positivity effect, and it was found to operate most strongly for perceptions of intimate "others," and less strongly for strangers and liked and disliked acquaintances.

Moreover, CSR activities may not directly, but rather indirectly impact firm performance, meaning that possible factors may mediate impacts of CSR activities on firm performance. According to the stakeholder theory (Freeman, 1984), CSR activities may enhance brand image, not only for customers, but also for employees and other stakeholders. Therefore, such activities can subsequently enhance customers' satisfaction, employees' morale and retention rates, and relationships with governments. The purpose of this study is, therefore, two-fold: (1) to examine the mediating effect of customer satisfaction between CSR activities and firm performance, and (2) to examine separate impacts of positive and negative CSR activities on customer satisfaction and firm performance.

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2. Methodology

2.1. Data

The study used three data sources: (1) KLD STAT for CSR data, (2) the American Customer Satisfaction Index (ACSI) for satisfaction data, and (3) Compustat for financial data from 10Ks. After collecting all data from the three sources, an analysis sought outliers in the data. One hotel observation and two restaurant observations were eliminated as outliers according to their excessive Studentized residuals with p-values smaller than 0.001. The final data set includes three hotels (Marriott, Starwood and Hilton) with 32 data observations and nine restaurants with 43 observations.

2.2. Model

The study employed fixed-effects path regression analysis of data to consider the study's purpose. The model is:

$$SAT = \beta_0 + \beta_1 PCSR + \beta_2 NCSR + \beta_i FIRMDUMMIES_i; \qquad (1)$$

$$Q = \alpha_0 + \alpha_1 PCSR + \alpha_2 NCSR + SIZE + \alpha_3 LEVERAGE + \alpha_i FIRMDUMMIES_i; \qquad (2)$$

$$Q = \alpha_0 + \alpha_1 SAT + \alpha_2 SIZE + \alpha_3 LEVERAGE + \alpha_i FIRMDUMMIES_i, \text{ and} \qquad (3)$$

$$Q = \alpha_0 + \alpha_1 SAT + \alpha_2 PCSR + \alpha_3 NCSR + \alpha_{4\_} SIZE + \alpha_5 LEVERAGE + \alpha_i FIRMDUMMIES_i, \qquad (4)$$

where, SAT represents customers' satisfaction of a firm, measured by the American Customer Satisfaction Index (ACSI); $PCSR$ represents positive corporate social responsibility, measured by KLD STATS; $NCSR$ represents negative corporate social responsibility, measured by KLD STATS; Q represents firm value, measured by Tobin's Q; $SIZE$ represents a firm's size, measured by log of sales, and $LEVERAGE$ represents a firm's capital structure, measured by debt-to-equity ratio. $FIRM$ $DUMMIES$ represent dummy variables, controlling for firm-specific effects where Hilton for the hotel sample and McDonald's for the restaurant sample are the base, and thus two (hotels) and eight (restaurants) $FIRM$ $DUMMIES$ are analyzed in the model where i represents the number of dummy variables.

By performing the four path regression analyses, the study examines a mediating effect of SAT between $PCSR$ ($NCSR$) and Q. Findings would suggest SAT as a mediator if significant coefficients of $PCSR$ and $NCSR$ exist from Eqs. (1) and (2), and a significant coefficient of SAT exists from Eq. (3), but such significant

Table 1
Summary of path regression analysis of hotels.[a]

	Coefficient	t-value	p-value
Panel I. CSR Activities to Satisfaction			
$SAT = \beta_0 + \beta_1 PCSR + \beta_2 NCSR + \beta_{3-4} FIRM\ DUMMIES_{1-2}$			
PCSR	**0.808**	**2.365**	**0.025**
NCSR	−0.048	0.221	0.827
F-value		**4.881**[**]	
Durbin-Watson		2.171	
Adjusted R^2		0.334	
Panel II. CSR Activities to Firm Value			
$Q = \alpha_0 + \alpha_1 PCSR + \alpha_2 NCSR + SIZE + \alpha_3 LEVERAGE + \alpha_{4-5} FIRM\ DUMMIES_{1-2}$			
PCSR	**1.246**	**3.489**	**0.002**
NCSR	−0.211	−0.926	0.363
SIZE	−0.315	−1.068	0.296
LEVERAGE	0.080	0.286	0.777
F-value		**4.557**[**]	
Durbin-Watson		1.853	
Adjusted R^2		0.408	
Panel III. Satisfaction to Firm Value			
$Q = \alpha_0 + \alpha_1 SAT + \alpha_2 SIZE + \alpha_3 LEVERAGE + \alpha_{4-5} FIRM\ DUMMIES_{1-2}$			
SAT	0.299	1.572	0.128
SIZE	0.062	0.193	0.848
LEVERAGE	0.074	0.247	0.807
F-value		2.269	
Durbin-Watson		1.534	
Adjusted R^2		0.170	
Panel IV. CSR Activities and Satisfaction to Firm Value			
$Q = \alpha_0 + \alpha_1 SAT + \alpha_2 PCSR + \alpha_3 NCSR + \alpha_4 SIZE + \alpha_5 LEVERAGE + \alpha_{6-7} FIRM\ DUMMIES_{1-2}$			
SAT	0.017	0.090	0.929
PCSR	**1.232**	**3.101**	**0.005**
NCSR	−0.210	−0.903	0.375
SIZE	−0.313	−1.039	0.309
LEVERAGE	0.081	0.282	0.780
F-value		**3.753**[**]	
Durbin-Watson		1.853	
Adjusted R^2		0.383	

All of those bold values have p-values that show a exact significance level.

[a] SAT represents customers' satisfaction of a firm, measured by the American Customer Satisfaction Index (ACSI); CSR represents positive corporate social responsibility, measured by KLD STATS; NCSR represents negative corporate social responsibility, measured by KLD STATS; Q represents firm value, measured by Tobin's Q; SIZE represents a firm's size, measured by log of sales; LEVERAGE represents a firm's capital structure, measured by debt-to-equity ratio; $FIRM$ $DUMMIES$ represent dummy variables, controlling for firm specific effects where Hilton for the hotel sample and McDonald's for the restaurant sample are the base. Results of two (hotel) and eight (restaurant) $FIRM$ $DUMMIES$ are not presented in the table because of the limited space issue and their secondary importance to the model.

[**] Statistical significance at the 0.01 level (2-tailed).

Table 2
Summary of path regression analysis of restaurants.[a]

	Coefficient	t-value	p-value
Panel I. CSR Activities to Satisfaction			
$SAT = \beta_0 + \beta_1 PCSR + \beta_2 NCSR + \beta_{3-10} FIRM\ DUMMIES_{1-8} + \varepsilon$			
PCSR	−0.075	−0.500	0.620
NCSR	**0.203**	**2.770**	**0.009**
F-value		**68.875**	
Durbin-Watson		2.094	
Adjusted R^2		0.942	
Panel II. CSR Activities to Firm Value			
$Q = \beta_0 + \beta_1 PCSR + \beta_2 NCSR + \beta_3 SIZE + \beta_4 LEVERAGE + \beta_{5-12} FIRM\ DUMMIES_{1-8}$			
PCSR	−0.415	−1.846	0.075
NCSR	−0.016	−0.110	0.913
SIZE	−0.029	−0.091	0.928
LEVERAGE	**−0.443**	**−2.664**	**0.012**
F-value		**24.627**	
Durbin-Watson		2.094	
Adjusted R^2		0.871	
Panel III. Satisfaction to Firm Value			
$Q = \beta_0 + \beta_1 SAT + \beta_2 SIZE + \beta_3 LEVERAGE + \beta_{4-11} FIRM\ DUMMIES_{1-8}$			
SAT	−0.099	−0.343	0.734
SIZE	−0.062	−0.207	0.838
LEVERAGE	−0.439	−2.541	0.016
F-value		**24.707**	
Durbin-Watson		1.726	
Adjusted R^2		0.861	
Panel IV. CSR Activities and Satisfaction to Firm Value			
$Q = \beta_0 + \beta_1 SAT + \beta_2 PCSR + \beta_3 NCSR + \beta_4 SIZE + \beta_5 LEVERAGE + \beta_{6-13} FIRM\ DUMMIES_{1-8}$			
SAT	−0.160	−0.557	0.582
PCSR	−0.431	−1.880	0.070
NCSR	−0.004	−0.025	0.980
SIZE	0.044	0.126	0.900
LEVERAGE	**−0.450**	**−2.667**	**0.012**
F-value		**22.234**	
Durbin-Watson		2.137	
Adjusted R^2		0.868	

All of those bold values have p-values that show a exact significance level.

coefficients of *PCSR* and *NCSR* disappear and only *SAT* remains significant in Eq. (4).

3. Findings

Table 1 shows the results of the path regression analysis for hotels. Panels I and II show only *PCSR* has a positive and significant impact on *SAT* (*t*-value = 2.365) and *Q* (*t*-value = 3.489), while Panel III shows *SAT* does not explain *Q* at a 0.05 significance level. Panel IV suggests that only *PCSR*, neither *NCSR* nor *SAT*, presents a significant coefficient for *Q* (*t*-value = 3.101). All together, for sampled hotels, the findings do not support that *SAT* plays a role of a mediator between *PCSR* (*NCSR*) and *Q*. Results from Table 2 for restaurants demonstrate that *NCSR* has a positive impact on *SAT* (Panel I), but neither *PCSR*, *NCSR* nor *SAT* shows a significant impact on *Q* (Panels II, III and IV).

4. Conclusion

Based on the findings, customer satisfaction does not seem to mediate the relationship between positive (negative) CSR activities and firm value for both hotels and restaurants. However, for hotels, positive CSR activities appear to make a positive impact on both customer satisfaction and firm value. A possible reason for this finding may be due to some other factors beyond customer satisfaction that mediate such relationships, for example, employee or community relationships. Therefore, rejecting the stakeholder theory is premature. Moreover, this study has two major limitations: (1) small sample size with 32 hotel and 43 restaurant observations which causes relatively weak statistical power and limited generalizability, and (2) no control variables, such as service quality (because such data is not available), in examining impacts of positive and negative CSR activities on customer satisfaction. Thus, future research is strongly encouraged to investigate the issue by accommodating these limitations.

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