


# Corrigendum: Investigating the relationship between corporate social responsibility and market, cost and environmental performance for sustainable business

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This correction does not alter the study's findings of significance or overall interpretation of the study results. The author apologises for any inconvenience caused.

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# Investigating the relationship between corporate social responsibility and market, cost and environmental performance for sustainable business

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**Purpose:** Corporate social responsibility (CSR) when integrated with the business model resulted in the holistic development of the organisation and the community. Many firms have found that CSR initiatives have a positive influence on performance. However, results indicating the contrary have also been noted during the review of literature. Research dealing with the relationship between the adoption of CSR initiatives and market, cost and environmental performance was scant. This research was directed towards finding the relationship between the adoption of CSR initiatives by the organisation and the different types of performance related to market, cost and environment.

**Design/methodology/approach:** This study made use of 527 cleaned responses collected from employees belonging to various organisations. Measurement and structural models were developed using analysis of moment structure (AMOS) to analyse the data. The models were also tested using income as a moderator.

**Findings/results:** Composite reliability, discriminant validity and average variance extracted revealed that the models were acceptable and the model fit indices for both measurement and structural models were within acceptable limits. The accepted hypotheses, namely, adoption of CSR initiatives, have a significant positive effect on the market, cost and environmental performance.

**Practical implications:** Organisations can use CSR as a strategic tool to enhance their market, cost and environmental performance for meeting the global competitiveness.

**Originality/value:** The results reveal that when organisations adopt CSR initiatives, the result is a chain reaction with developments being witnessed in several areas. This highlights the need for organisations to adopt CSR initiatives within their business model. A longitudinal study is required to find the extent of the influence of CSR initiatives on market, cost and environmental performance.

**Keywords:** corporate social responsibility; market performance; cost performance; environmental performance; sustainable business.

## Introduction

Organisations compete with each other to survive in the marketplace. Several strategies are proposed and adopted in order to stay ahead of the competitors (Papadas, Avlonitis, Carrigan, & Piha, 2019). Zero sum competition, blue ocean strategy, balanced scorecard and strategic options development analysis (SODA) are some of the strategies organisations adopt to counter the challenges that competition poses (Institute for Manufacturing, 2016). In addition, organisations also adopt green practices and sustainability for long-term growth (Teixeira & Canciglieri Junior, 2019; Yang, Zhang, Jiang, & Sun, 2015). Corporate social responsibility (CSR) is yet another activity that helps organisations to build business for sustainability (Kolk, 2016). In some countries, CSR has evolved from a self-regulatory mechanism to mandatory schemes at the regional and national levels. It helps organisations to become accountable to the organisation itself, its social and non-social stakeholders, the customers and the government (Maas & Reniers, 2014). Employees who are the internal stakeholders upon witnessing their organisations' involvement in CSR activities develop a stronger bond with the organisation. Corporate responsibility is also called by different names – corporate sustainability, sustainable business, corporate conscience or corporate citizenship (Wood, 1991). Thus, CSR acts as a strategic tool among organisations, with the aim of increasing profits in the long run because of the trust instilled among the

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stakeholders, the customers and the government. It also helps organisations to improve their public relations, comply with the legal standards, if it is mandatory, and establish ethical credentials.

Corporate social responsibility has been criticised for giving rise to lofty and unrealistic expectations and for having no relationship with performance (Henderson, 2001). On the contrary, meta-analysis (Boaventura & Silva, 2012; Margolis & Walsh, 2003; Orlitzky, Schmidt, & Rynes, 2003; Van Beurden & Gössling, 2008) revealed that several researchers have established a positive relationship between CSR and performance. However, research on how CSR was individually related to market and environmental performance was scant. This study proposed to address this gap in research.

Sustainable development started gaining momentum since the Brundtland Commission report of the United Nations in 1987. In order for businesses to be considered sustainable, their performance was evaluated in terms of the triple bottom line (TBL) framework, namely, social, environmental and financial. Hao, Farooq and Zhang (2018) stressed how unattended social wants that are related to intrinsic motivation of individuals are related to CSR. Their work highlights the need to implement CSR initiatives that are focussed towards the social aspects, so that they result in better employee motivation and organisational outcomes. On similar lines, Farooq, Hao and Liu (2019) have highlighted the importance of understanding the role of religiosity in CSR from a cross-cultural perspective based on organisational outcomes. The importance of socio-cultural aspects is gaining traction along with the financial and environmental dimensions. It is very important to cater to the needs of external stakeholders as compared to internal stakeholders because they are outside the organisation and they need to be informed of the happenings within the organisation for it to flourish. The stakeholder theory states that for a business to be successful, there has to be value creation among its stakeholders. When every stakeholder's interest is taken as a business entity, it will result in profit maximisation (Jensen, 2000).

In this process, it is necessary for a business to incorporate the TBL framework for overall development. Adopting TBL, that is, 'people, planet, profit', will help organisations attain sustainability (Wikipedia, 2020) Several researchers have worked on how CSR influences (Pfarrer, 2010) financial performance. In this article, in tune with the TBL framework, the relationship between CSR and an organisation's market, cost and environmental performance is studied.

The constructs used in this research context, namely, CSR and performance, are defined. Corporate social responsibility is defined as a company's sense of responsibility towards the community and environment (both ecological and social) in which it operates (Kaschny & Nolden, 2018). Thus, in this research, in terms of community and environment, all external stakeholders, including customers and government,

are assessed because their expectations and needs are difficult to be assessed and met. According to Richard, Devinney, Yip and Johnson (2009), organisational performance encompasses financial, market and shareholder returns. In this research, considering the importance of environmental performance (Haanaes et al., 2011), the organisational performance is measured in terms of market, cost (which includes financial aspects) and environmental performance. Market performance was defined in terms of the company's reputation and image in the market, the company's offerings and consumers' expectations, and the company's success in launching new products (González-Benito & González-Benito, 2005a, 2006). Cost performance was defined in terms of the organisation's effectiveness in reducing the operation costs – production, distribution and supply chain cost because of green practices, energy costs because of cleaner technology and environmental costs because of green practices. Environmental performance was defined as an organisation's effectiveness in reducing carbon emission; waste water generation; solid wastes generation; consumption of hazardous, harmful or toxic materials; and preventing environmental accidents (Zhu, Sarkis, & Lai, 2007).

## Literature review

The theoretical relationship between CSR and performance has often been reviewed. It was found from literature that there is extensive work being conducted in this area. Measuring organisational performance is extremely critical to survive in this globally competitive environment. Also, the variables that influence organisational performance are being extensively investigated by researchers because of their important role in the organisation. In this research, a review is being conducted on the relationship between CSR and performance, more specifically the influence of CSR on various types of performance.

Friedman (1970) stated that the firms are responsible to generate profits and that following the rules of the business and investing in CSR activities will eat into the profits. As per the stakeholder's theory (Freeman, 1994, 1984), it will result in competitive advantage because it will lead to better relationships with stakeholders and lesser transaction costs (Jones, 1995) and better market opportunities (Fombrun, Gardberg, & Barnett, 2000). Thus, based on the stakeholder's theory, CSR was found to be directly associated with the firm's performance (Porter & Kramer, 2006; Vilanova, Lozano, & Arenas, 2009) because of stronger linkage between the organisation and its stakeholders and because of its CSR initiatives, which in turn lead to a competitive advantage. Corporate social responsibility disclosures were found to be beneficial to the organisations because stakeholders hold the organisations in a better perspective because of their CSR initiatives (Gray, Kouhy, & Lavers, 1995). This leads to marketing and environmental issues gaining importance. Using the Granger causality method, Adegbola (2014) studied the impact of CSR as a marketing tool for improving organisational performance. Ağan, Kuzey, Acar and Açıkgöz (2016) empirically tested how CSR impacts environmental

supplier development, which in turn impacts financial performance. Thus, the review indicates that implementation of CSR initiatives has a predominant role in influencing the different types of performances, namely, market, environmental as well as financial.

Although there are several researches that confirmed the relationship between CSR and performance (Crifo, Diaye, & Pekovic, 2016; Gallardo-Vázquez & Sanchez-Hernandez, 2014; Karaye, Ishak, & Che-Adam, 2014; Madueño, Jorge, Conesa, & Martínez-Martínez, 2016; Mustafa, Othman, & Perumal, 2012; Orlitzky, 2011), few studies that do not confirm this relationship were also found (Blowfield & Murray, 2008).

The relationships between CSR and the different types of performance, namely, financial, economic and social have been examined separately, and very few studies have empirically examined the relationship of CSR with environmental performance. This research proposed to examine the relationship between CSR and individual performances, namely, market, cost and environmental.

### Corporate social responsibility and market performance

A review proposed to find the relationship between CSR initiatives undertaken by the organisation and its market performance. The review highlighted that very few researchers have examined this relationship. Byun and Oh (2018) stated that publicised CSR activities are positively associated with shareholder value and improved future operating performance. However, they did not extend this to market performance. Similarly, researchers have examined the influence of CSR on the social front. Zhu, Liu, and Lai (2016) examined how CSR practices improved financial and social performance among Chinese enterprises. The results indicated that community-related CSR practices need to be highlighted in their operations. Lau, Lee, and Cheng (2018) developed an exploratory taxonomy of CSR practices among China's manufacturing industries. They identified three clusters and examined how these clusters are related to performance – financial, operational, reputational and social capital. Although the influence of CSR on the social context has been studied, it is more important to investigate how it directly influences the market performance. Very little research on this relationship has been found, and hence to fill this research gap, considering a positive relationship existed between CSR initiatives and performance, it was hypothesised that:

**H1:** There will be a significant positive relationship between the implementation of CSR initiatives and market performance.

### Corporate social responsibility and cost performance

The review highlighted that extensive research has been carried out by several researchers to examine the relationship between CSR and financial performance. It was found that CSR can contribute positively to financial performance by

increasing product recognition (Parket & Eilbirt, 1975), developing a positive employee attitude (Brammer, Millington, & Rayton, 2007; Rupp, Ganapathi, Aguilera, & Williams, 2006) or focussing on the firm's public image (Fombrun & Shanley, 1990). This indicated that the undertaking of CSR initiatives by the organisation has a positive influence on other key organisation-level variables, namely, a positive image, increased level of product recognition among the external stakeholders as well as a positive attitude among the employees. The review highlighted that through these positive influences, the performance also improved. The relationship between CSR and performance was mostly measured in monetary terms.

The review also indicated that firms get rewarded for their commitment towards CSR activities by way of increased value in the minds of stakeholders, lower cost of capital and greater capital inflows (El Ghouli, Guedhami, Kwok, & Mishra, 2011; Goss & Roberts, 2011; Jo & Harjoto, 2011). Furthermore, although a significant positive relationship between CSR initiatives and financial performance was confirmed by several researchers (Cornett, Erhemjamts, & Tehranian 2016; Fayad, Ayoub, & Ayoub 2017; Jin & Drozdenko, 2010; Mallin, Farag, & Ow-Yong, 2014; Maqbool & Zameer, 2018; Wu & Shen, 2013), Aupperle, Carroll and Hatfield (1985) contended that there was no relationship between an organisation's CSR activities and its profitability.

To further examine this relationship, a longitudinal study was conducted by Lin, Yang, and Liou (2009) who empirically found the impact of CSR on corporate financial performance in Taiwan using 1000 business cases in the short and long terms. In the long term, a significant fiscal advantage was witnessed while there was not much influence seen in the short term. Furthermore, Lindgreen, Swaen, and Johnston (2009) and Lindgreen and Swaen (2010) examined the impact at both the macro-social and enterprise levels.

Both in the longitudinal and the cross-sectional study, the researchers have substantiated that CSR initiatives have a positive impact among stakeholders, which contributes to improved financial performance in the long term, across every sector.

An investigation was conducted including companies that were doing well in terms of financials, and it was found that one of the reasons for this performance was their disclosure of their CSR initiatives to the stakeholders (Yusoff, Mohamad, & Darus, 2013). This was further confirmed by Chen Feldmann, and Tang (2015) who noted this relationship in the manufacturing industry.

Results on the contrary related to the disclosures of CSR were also noted. Angelia and Suryaningsih (2015) found that CSR disclosures had no significant effect on return on assets, but there was a significant effect on return on equity. Similarly, Chen, Hung, and Wang (2018) found that the mandatory disclosures of CSR initiatives in China have led to some firms experiencing a decrease in their profitability.



The review highlighted the fact that the relationship between CSR and financial performance was positive in a majority of instances (Aragón-Correa, Hurtado-Torres, Sharma, & García-Morales, 2008; Bird, Hall, Momentè, & Reggiani, 2007; Flammer, 2015; Goll & Rasheed, 2004; Nicolau, 2008; Orlitzky et al., 2003), while in a few cases, a negative relationship was seen because of additional costs involved in implementing CSR initiatives (Brammer, Brooks, & Pavelin, 2006), and in some instances the results indicated no effect (Chand, 2006; Chih, Chih, & Chen, 2010; Fauzi & Idris, 2009; McWilliams, Siegel, & Wright, 2006; Mulyadi & Anwar, 2012).

On similar lines, the relationship between CSR and economic performance was examined, and contradictory results have been presented: a positive relationship was indicated by a majority of researchers (Bernal-Conesa, Briones-Peñalver, & De Nieves-Nieto, 2016; Blasi, Caporin, & Fontini, 2018; Dobrea & Dinu, 2012; Gallardo-Vázquez & Sanchez-Hernandez, 2014; Garcia-Castro, Ariño, & Canela, 2010; Wang, Chen, Yu, & Hsiao, 2015; Sila & Cek, 2017), while a negative relationship was indicated by some (Muñoz, Pablo, & Pena, 2015).

Furthermore, in the hospitality sector, namely, hotel, casino, restaurant and airline companies, the relationship between positive and negative CSR activities and financial performance (Kang, Lee, & Huh, 2010) and between different dimensions of CSR on corporate financial performance in the tourism sector was examined (Inoue & Lee 2011). In all these studies, which dealt predominantly with the hospitality sector (Kang et al., 2010; Rhou, Singal, & Koh, 2016; Theodoulidis, Diaz, Crotto, & Rancati, 2017), mixed results have been reported.

Although extensive research was present in the review, considering the contradictory nature of results, examining the following hypothesis was proposed:

**H2:** There will be a significant positive relationship between the implementation of CSR initiatives and cost performance.

### Corporate social responsibility and environmental performance

The review of literature indicated that although several researchers have noted the relationship between CSR and financial performance, very few have examined the relationship of CSR with environmental performance.

Sidhoum and Serra (2017) found the relationship between CSR and various dimensions of performance – environment, social, economic and governance – among US electric utilities. They found that there is a strong positive link between economic and environmental performance, and economic and social performance. These results indicate that environment-friendly technologies will improve financial health and help develop a better environmental system, which will lead to better economic outcomes. In recent times, with rising awareness and importance given to preserving our environment, it is imperative to understand the relationship existing between the implementation of

CSR initiatives and environmental performance. To examine this, the following hypothesis was posited:

**H3:** There will be a significant positive relationship between the implementation of CSR initiatives and environmental performance.

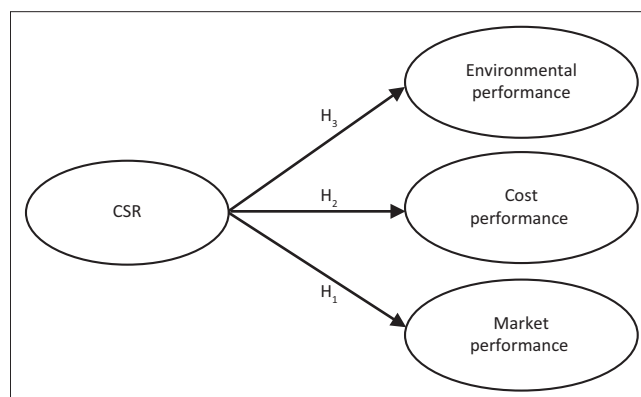
The conceptual model for the above hypotheses is given in Figure 1. Considering the importance of demographic variables, their significance on the construct variables also needs to be investigated.

## Method

A review of the literature was conducted to find the scales that can be used to measure CSR and the different types of performance.

### Scale to measure corporate social responsibility

The CSR scale developed by Turker (2009) had 17 items under four dimensions. The reliability of the scale was stated to be 0.9013. Tian and Robertson (2017) had adopted this scale and modified it to suit their research. The scale proposed by Tian and Robertson (2017) had 12 items that were used in this research work. The CSR scale measures employee's perception of the impact of their organisation's CSR initiatives on the environment and society (e.g. 'our company participates in activities that aim to protect and improve the quality of the natural environment'); on the customer (e.g. 'our company respects consumer rights beyond the legal requirements'); and on the government (e.g. 'our company always pays its taxes on a regular and continuing basis'). The item that was excluded in this study was how CSR helped the internal employees (e.g. 'our company policies support employees who want to acquire additional education'). The said item was excluded because it was felt that it was already represented in other constructs, such as socially responsible Human Resource Management (HRM) practices, high-performance work systems and work-family support (De Roeck, Akremi, & Swaen, 2016; Farooq, Rupp, & Farooq, 2017), and it dealt with internal employees. The research investigated how external stakeholders, namely, social, non-social, government and customers perceived the CSR initiatives being adopted



CSR, corporate social responsibility.

**FIGURE 1:** The conceptual model.

by the organisation. This study focusses on the external stakeholders because it was more important to assess the implementation of CSR initiatives from their perspective. In this study, internal stakeholders, namely, employees were not assessed, which is one limitation of this research.

Accordingly, 12 items adapted from the work of Turker (2009) given in Appendix 1 were used in this research.

### Scale to measure market, cost and environmental performance

The scale used to measure environmental performance was adapted from the work of Zhu et al. (2007), which had a Cronbach's alpha value of 0.93 and, to measure market performance, was adapted from the work of González-Benito and González-Benito (2005b), with a Cronbach's alpha of 0.79. To measure cost performance, one item, namely, 'there was a reduction in operation costs – production, distribution & supply chain cost because of green practices' was adapted from the work of Jabbour, Jugend, Jabbour, Gunasekaran and Latan (2015), and the author has framed the other two items to include the energy and environment costs related to performance. The Cronbach's alpha for the reported item was 0.758. A questionnaire was prepared for distribution among employees working in different types of organisations to measure the constructs. A copy is given in Appendix 1.

### Data collection

Permission was sought from organisations to conduct the survey among the employees who are willing to answer the questionnaire. The organisations include those in the manufacturing, automobile, insurance, information technology and the insurance sector. The study was conducted in India by contacting the human resource managers from different organisations. The questionnaire was handed over to the manager of the human resource department who handed it over to the employees. Filled-up questionnaires were routed back through the human resource department. A total of 1000 questionnaires were distributed among the employees. The method of convenience sampling was adopted. The data were collected during the period from April to November 2018.

### Analysis

The responses were analysed using Statistical Package for Social Sciences (SPSS) and Analysis of Moment Structure (AMOS). A demographic profile was prepared. Descriptive statistics were calculated. Independent *t*-test and analysis of variance (ANOVA) were conducted for any significant difference between the demographic profile of the respondents and the study variables. Measurement and structural models were developed. Composite reliability (CR) and discriminant validity (DV) were checked to validate the results. Model fit indices were checked to find the significance of the results. The hypotheses were tested and inferences were drawn.

## Results

### Descriptive statistics

The responses received were checked for missing data. It was found that after removing for missing data, 527 responses were fit to be taken up for further analysis. The demographic profiles of the respondents are given in Table 1. It was found that male ( $n = 294$ ) and female ( $n = 233$ ) respondents were almost the same in number. Considering the education level of the respondents, it was found that the majority were graduates (345). With regard to the income of the respondents, 37.7% belonged to the high-income category, 45% belonged to the middle-income group and 17.3% belonged to the low-income group.

The mean and standard deviation (SD) of the study variables were found. They were as follows: CSR (mean = 5.388, SD = 0.938); market performance (mean = 5.667, SD = 1.109); cost performance (mean = 5.19, SD = 1.203); environmental performance (mean = 5.327, SD = 1.12). It was found that on a scale of 1–7, the majority of employees were positively inclined towards agree. Also, the SD was in the acceptable range. Among the study variables, it was found that the employees seem to agree more favourably for the items under market performance, followed by CSR and environmental performance.

An independent '*t*' test was carried out to find if there was a significant difference in mean with respect to gender and education among the variables. Analysis of variance was conducted to find if there was a significant difference in mean among the three categories of income for the study variable. The test results are presented in Table 2. From the '*t*' test, it was found that for CSR there was a significant difference in mean value with respect to gender, while for all types of performance there was no significant difference in mean with respect to gender. In the case of education, it was found that there was no significant difference in mean among graduates and postgraduates for CSR, market and environmental performance. However, in the case of cost performance, there was a significant difference in mean among graduates and postgraduates in how they perceived cost performance. From the results of ANOVA, it was found that there was a significant difference in mean between the three income groups for all study variables. This indicated that employees

**TABLE 1:** Demographic profile.

Variables	Number	%
<b>Gender</b>		
Male	294	55.8
Female	233	44.2
<b>Education</b>		
Graduation	345	65.5
Postgraduation and above	182	34.5
<b>Income (per month)</b>		
High income: >Rs. 30 000	199	37.7
Medium income: between Rs.15 000 and Rs.30 000	237	45.0
Low income: <Rs.15 000	91	17.3

belonging to different income groups perceived each of these variables differently. As in the majority of instances, there was no significant difference in the demographic variables and the study variables – the responses were considered homogeneous and analysis was conducted. However, a significant difference was found for different types of income groups; the conceptual model was tested using income as a moderator.

## Measurement model

The model fit indices for the measurement model were as follows:  $\chi^2 = 643.175$ ;  $df = 221$ ;  $p = 0.000$ ;  $\chi^2 / df = 2.910$ ; goodness-of-fit index (GFI) = 0.901; adjusted goodness-of-fit index (AGFI) = 0.876; Normed Fit Index (NFI) = 0.916; Tucker–Lewis coefficient (TLI) = 0.935; incremental fit index (IFI) = 0.943; comparative fit index (CFI) = 0.943; RMSEA = 0.06; standardised root mean square residual (SRMR) = 0.0594. The recommended cut-off values as per Cohen (1992) and Hair, Black, Babin and Anderson (2010) are as follows:  $\chi^2 / df < 5$ ;  $p < 0.05$ ; GFI > 0.85; AGFI > 0.80; NFI > 0.90; TLI > 0.9; IFI > 0.9; CFI > 0.9; root mean square error of approximation (RMSEA) < 0.08; SRMR < 0.08. The model fit values when compared to the recommended values were well within the cut-off values and hence were found to be acceptable.

The CR, DV and average variance extracted (AVE) are given in Table 3. Composite reliability was found to range from 0.822 to 0.914, and AVE was above 0.5, indicating a good fit. As the values along the diagonal in Table 3 are more than the off-diagonal elements which are the correlations between

**TABLE 2:** Independent *t*-test and analysis of variance.

Variables	Test	Significance ( <i>p</i> -value)
<b>Gender</b>	<i>t</i> -test – $t_{525}$	-
CSR	-2.285	0.023*
Market	-1.679	0.094
Cost	-1.176	0.240
Environment	-0.130	0.896
<b>Education</b>	<i>t</i> -test – $t_{525}$	-
CSR	0.798	0.425
Market	0.615	0.539
Cost	2.723	0.007*
Environment	1.727	0.085
<b>Income</b>	<i>F</i> test = $F_{2,524}$	-
CSR	7.029	0.001*
Market	7.322	0.001*
Cost	4.404	0.013*
Environment	7.929	0.000*

CSR, corporate social responsibility.

\*,  $p < 0.05$ .

**TABLE 3:** Composite reliability, convergent and discriminant validity.

Construct	CR	AVE	CSR	Market	Cost	Environment
CSR	0.877	0.707	0.841†	-	-	-
Market	0.882	0.715	0.723	0.845†	-	-
Cost	0.892	0.733	0.604	0.638	0.856†	-
Environment	0.914	0.684	0.591	0.555	0.672	0.827†

Note: All items in each variable have values of AVE > 0.5 and CR > 0.7.

†, The elements along the diagonal are the square root of AVE and are greater than the off-diagonal elements that are the correlations between constructs.

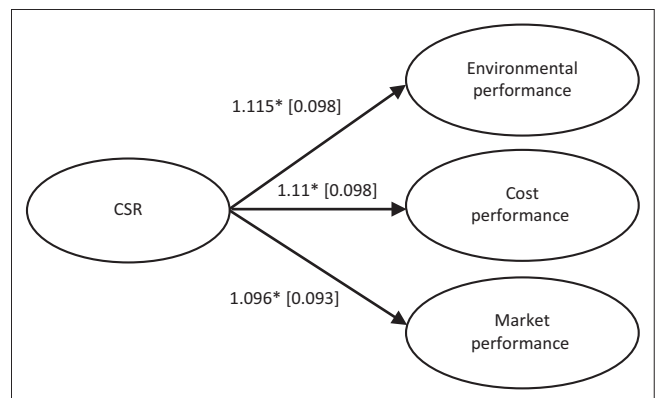
AVE, average variance extracted; CR, composite reliability; CSR, corporate social responsibility.

constructs, it indicates that each of these constructs is distinctly measuring the respective construct using those items. This indicates DV is present. The presence of CR, AVE and DV are significantly good, and hence it was confirmed that the model is a good fit.

## Structural model

The structural model was run in AMOS using maximum likelihood estimates. The unstandardised coefficients of the path for the hypothesised model are given in Figure 2. The model fit was also found. They are as follows:  $\chi^2 = 728.665$ ;  $df = 224$ ;  $p = 0.000$ ;  $\chi^2 / df = 3.253$ ; GFI = 0.889; AGFI = 0.863; NFI = 0.905; TLI = 0.923; IFI = 0.932; CFI = 0.932; RMSEA = 0.065; SRMR = 0.0601. The fit indices were found to be well within the cut-off values recommended by Cohen (1992) and Hair et al. (2010), and hence the model fit was found to be acceptable. The structural model with unstandardised regression weights, their significance and the error term obtained from SPSS are given in Figure 2. The effect of CSR on all three types of performance was found to be significant.

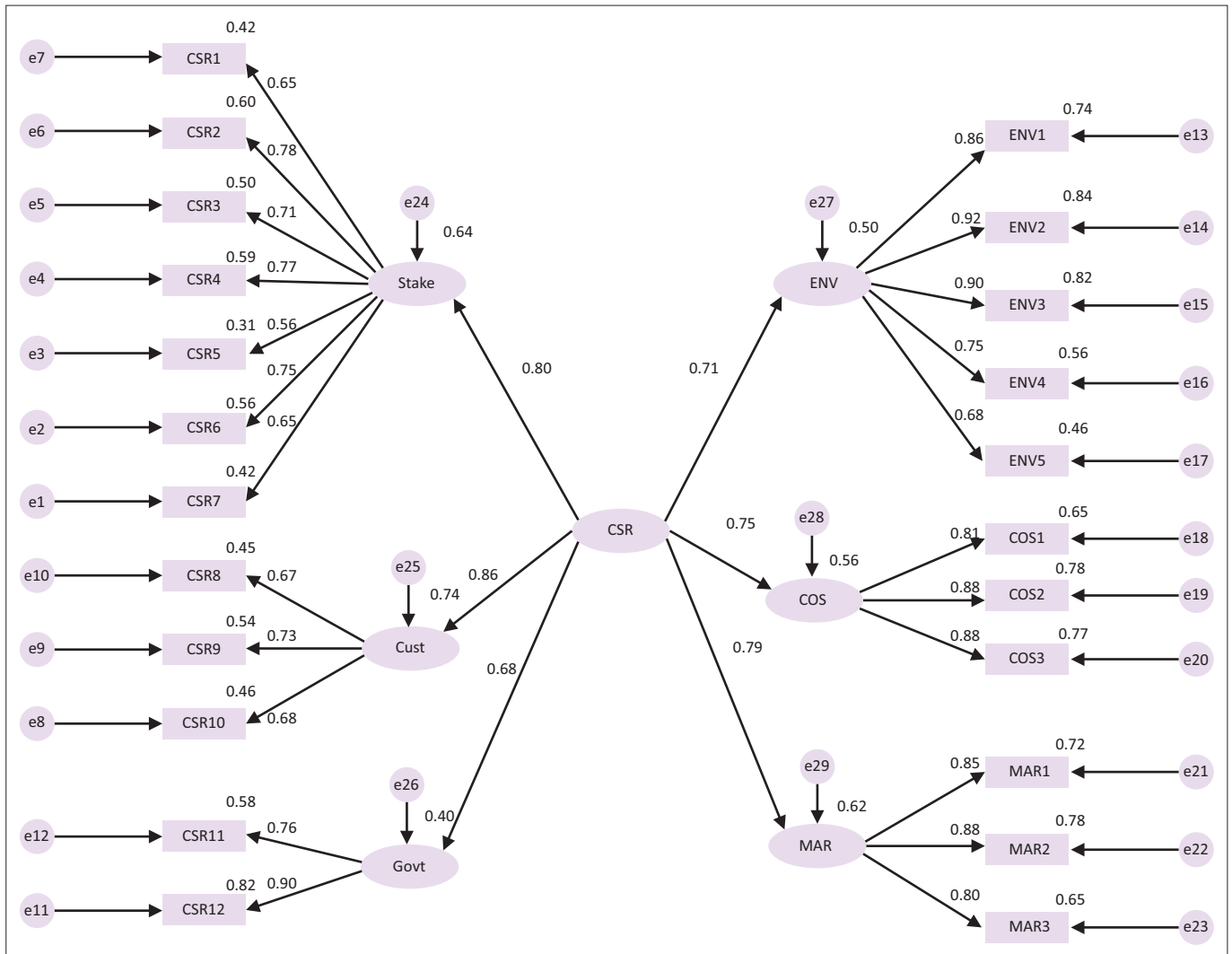
The full structural model obtained using AMOS is given in Figure 3. It is found that all the path coefficients are significant and hence all the three hypotheses are accepted. From the standardised estimates given as path coefficients, it is found that the effect of CSR on market performance is 0.79, followed by 0.75 on cost and 0.71 on environmental performance. The model also highlights the fact that the factor loadings of the items are all above 0.56, and that the model is a robust model.



CSR, corporate social responsibility.

\*,  $p < 0.001$ .

**FIGURE 2:** The structural model.



CSR, corporate social responsibility; ENV, environment; COS, cost; MAR, market; Cust, customer; Govt, government; Stake, stakeholder.

**FIGURE 3:** A structural model with full latent structure.

Among the CSR dimensions, it was found that the customer dimension has a maximum contribution with 0.86. The importance of customers in CSR has also been stressed by several researchers. This is followed by stakeholders (social and non-social) with a contribution of 0.80. Thus, the research highlights the importance of these two dimensions with reference to CSR. Among the items on stakeholders, CSR was found to have the maximum weights:

'My company makes investment to create a better life for future generations.' (CSR2)

'My company targets sustainable growth, which considers future generations.' (CSR4)

'My company contributes to campaigns and projects that aim to promote the well-being of the society.' (CSR6)

For the customer, it was heavily loaded:

'My company provides full and accurate information about its product to its customers.' (CSR9)

As well as for government:

'My company complies with legal regulations completely and promptly.' (CSR12)

Among market performance, it was found to be heavily loaded:

'There has been an improvement in the company's reputation and image in the market.' (MAR1)

'There is better alignment between what the company is offering with consumers' expectations.' (MAR2)

'The company has had success in launching new products.' (MAR3)

All three items under cost were found to be heavily loaded on cost performance:

'There was a reduction in operation costs – production, distribution and supply chain cost because of green practices.' (COS1)

'There was a reduction in energy costs because of cleaner technology.' (COS2)

'There was a reduction in environmental costs because of green practices.' (COS3)

It was found that environments have maximum factor loadings:

'The company has reduced its carbon emission.' (ENV1)



'The company has reduced its waste-water generation.'  
(ENV2)

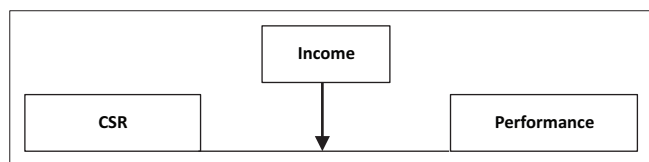
'The company has reduced its solid wastes generation.'  
(ENV3)

### Moderation model

It was found from ANOVA that there was a significant difference among the constructs with respect to income. Hence, income was used as a moderator, and the moderated model is given in Figure 4. The moderation model was tested in SPSS using process plugin (Hayes, 2013).

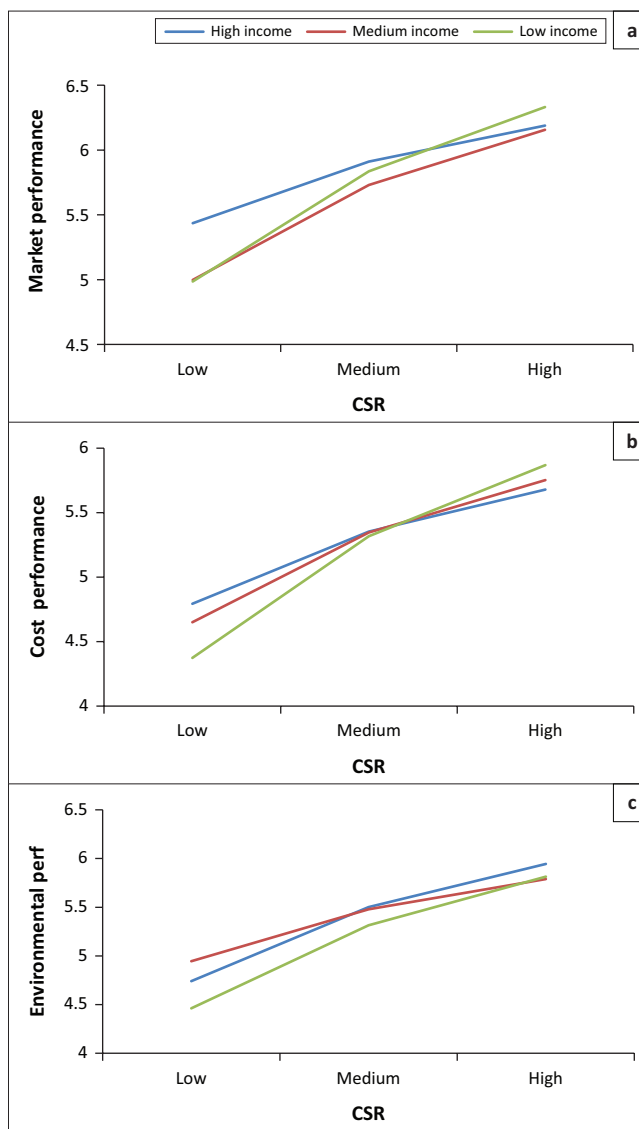
The unstandardised coefficients of the moderation model are given in Table 4. The income-moderated interaction plots are given in Figure 5. High income = employees with income > Rs.30 000 was fixed as the reference.

The effect of the interaction was found: CSR × medium\_income and CSR × low\_income was found to significantly influence market, cost and environmental performance. Also, the conditional effect of income on market, cost and environmental performance was significant for all three income groups (Table 5). The change in R<sup>2</sup> for the unconditional interaction of CSR × income on market performance was 0.0133 and also significant (*p* < 0.01). Figure 5a shows the effect of CSR on market performance at three levels of income. The rate of increase in market performance was found to be high for increasing levels of



CSR, corporate social responsibility.

FIGURE 4: The moderation model.



CSR, corporate social responsibility.

FIGURE 5: Moderation model interaction plots.

TABLE 4: Unstandardised regression coefficients – Moderated by income.

Independent variable	Dependent variable											
	Market performance				Cost performance				Environmental performance			
	$\beta$	SE	LLCI	ULCI	$\beta$	SE	LLCI	ULCI	$\beta$	SE	LLCI	ULCI
Intercept	5.8182***	0.0645	5.6915	5.9449	5.2436***	0.0721	5.1021	5.3852	5.3529***	0.0661	5.2231	5.4827
CSR	0.4764***	0.0791	0.3210	0.6316	0.5585***	0.0883	0.3859	0.7320	0.7608***	0.0810	0.6017	0.9200
med_inc	-0.2314***	0.0867	-0.4017	-0.0611	-0.0336	0.0969	-0.2240	0.1567	0.0212	0.0888	-0.1533	0.1957
low_inc	-0.1492	0.1160	-0.3771	0.0788	-0.1101	0.1296	-0.3648	0.1445	-0.2043*	0.1189	-0.4378	0.0292
CSR × med_inc	0.2547**	0.0993	0.0597	0.4498	0.1378	0.1109	-0.0802	0.3557	-0.2291**	0.1017	-0.4289	-0.0292
CSR × low_inc	0.3733***	0.1208	0.1359	0.6106	0.3862***	0.1350	0.1210	0.6514	0.0931	0.1238	-0.1501	0.3363
R	0.6000	-	-	-	0.5663	-	-	-	0.5838	-	-	-
R <sup>2</sup>	0.3600	-	-	-	0.3207	-	-	-	0.3408	-	-	-
MSE	0.7945	-	-	-	0.9920	-	-	-	0.8341	-	-	-
F	58.6144	-	-	-	49.1869	-	-	-	53.8740	-	-	-
df1	5.0000	-	-	-	5.0000	-	-	-	5.0000	-	-	-
df2	521.0000	-	-	-	521.0000	-	-	-	521.0000	-	-	-
p	0.0000	-	-	-	0.0000	-	-	-	0.0000	-	-	-

CSR, corporate social responsibility; LLCI, lower level for confidence interval; ULCI, upper level for confidence interval; SE, standard error; MSE, mean standard error; *df*, degrees of freedom;  $\beta$ , unstandardized beta coefficients.

\*, *p* < 0.10; \*\*, *p* < 0.05; \*\*\*, *p* < 0.01.

**TABLE 5:** Conditional effect of the moderator income on performance.

Moderator	Effect	SE	LLCI	ULCI
<b>Dependent variable: Market performance</b>				
High income	0.4763***	0.0791	0.3210	0.6316
Medium income	0.7310***	0.0601	0.6130	0.8490
Low income	0.8496***	0.0913	0.6701	1.0290
<b>Dependent variable: Cost performance</b>				
High income	0.5585***	0.0883	0.3849	0.7320
Medium income	0.6962***	0.0671	0.5644	0.8281
Low income	0.9447***	0.1021	0.7441	1.1452
<b>Dependent variable: Environment performance</b>				
High income	0.7608***	0.0810	0.6017	0.9200
Medium income	0.5318***	0.0615	0.4109	0.6526
Low income	0.8540***	0.0936	0.6701	1.0378

LLCI, lower level for confidence interval; ULCI, upper level for confidence interval; SE, standard error.

\*,  $p < 0.10$ ; \*\*,  $p < 0.05$ ; \*\*\*,  $p < 0.01$ .

CSR among low-income employees as compared to medium- and high-income employees. It is found from the figure that when the CSR initiatives are low in the organisation, then the market performance will be low among low-income employees while it will be relatively high for high-income employees. However, when CSR initiatives are high, then the market performance is rated to be higher by low-income employees as against high-income employees. The change in  $R^2$  for the unconditional interaction of CSR  $\times$  income on cost performance was 0.0108 and also significant ( $p < 0.05$ ). Table 5 indicates that interaction is significant among low-income employees with regard to cost performance. When the CSR initiatives are perceived to be low, the cost performance is low, while when the CSR initiatives are perceived to be high, there is a sharp rise in cost performance. The change in  $R^2$  for the unconditional interaction of CSR  $\times$  income on environmental performance was 0.0129 and also significant ( $p < 0.01$ ). Table 5 indicates that the interaction effect is significant among middle-income employees while noting the effect of CSR on environmental performance.

## Discussion

The model indicates that a CSR initiative implemented in the organisation has a very important role in the performance of the organisation. This study confirms the results obtained by researchers (Gallardo-Vázquez & Sanchez-Hernandez, 2014; Orlitzky, 2011) that CSR has a positive influence on performance. The review indicated that the relationship of CSR initiatives with financial, economic and social performance yielded contradictory results. Hence, in this study, the relationship of CSR initiatives on different types of performance was examined.

This research found a positive relationship between CSR and market performance as hypothesised.

This study is a unique contribution to theory because review indicated the presence of very few research studies that examined this relationship, although a positive relationship was earlier found between CSR and social performance (Zhu et al., 2016). This study confirms the conclusions drawn from

stakeholder's theory that implementation of CSR initiatives will impart a competitive advantage. Among the three, it was found that the effect of CSR on market performance is maximum. This is because of improvement in the company's image and reputation in the market because of the CSR initiatives. The company witnesses success in the marketplace for all its ventures because it is able to align the market expectations with its offerings.

The second hypothesis indicated a significant positive relationship between CSR and cost performance.

This confirms the results obtained by several researchers signifying a positive relationship between CSR and financial or economic performance (Blasi et al., 2018; Flammer, 2015; Sila & Cek, 2017). When CSR initiatives are implemented, it is also found that it helps organisations to reduce costs because of their policies on clean technology and green practices as well reduction in its costs in the supply chain.

A positive relationship between CSR and environmental performance found in this research confirmed the findings of an earlier research (Sidhoum & Serra, 2017). Implementing CSR initiatives helps an organisation to take a look inwards. It motivates the employees to support solid and liquid waste reduction. The organisations strive to reduce emission as well as avoid the use of materials that may be harmful to the environment. The results of this research can help an organisation to understand the importance of the CSR initiative and how its implementation will lead to holistic benefits.

The moderation model delineated how the income moderated the relationship between CSR and the three types of performance. The model indicated the significant effect of the income level of employees. The model highlighted the fact that to enhance market performance through CSR initiatives, all three income groups should play a significant role. For enhancing cost performance, the model highlighted the fact that the low-income group was sensitive. This indicated that proper communication has to be made with employees belonging to low-income groups so that cost performance can be improved. To improve environmental performance, it was found that employees belonging to the middle-income group played a significant role. When CSR initiatives are undertaken in the organisation, it is suggested that employees belonging to the middle-income group may be roped in so that they will contribute towards improving environmental performance.

## Implications

The significant positive relationship between CSR and market and environmental performance is a unique contribution to the existing CSR literature. The research throws open lots of avenues for future research to find how cleaner production and regulatory frameworks would operate in the presence of CSR and environmental performance.

This research highlights the importance of implementing CSR initiatives because of their manifold advantages for the

organisation in enhancing its performance through its stakeholders – especially the external stakeholders who are witnessing the positive impacts of CSR to the society.

## Conclusion

The review of the literature indicated that although there was an enormous amount of research conducted on the relationship between CSR and performance, there were very few studies that dealt with the different types of CSR. Also, research on the influence of CSR on the market, cost and environmental performance was scant. This study presented in detail the relationship between CSR and the different types of performances. It was found that the adoption of CSR initiatives by the organisation has a significant positive effect on the three types of performance. Among the three types of performance, the adoption of CSR initiatives was found to have the maximum impact on market performance, followed by cost performance and then on environmental performance. By adopting CSR initiatives, organisations will perform well in all fronts, and this will lead to sustainable business development.

This research has certain limitations. A longitudinal study is required to find the impact of CSR on the different types of performance. Although care has been taken to ensure that anonymity is maintained in the collection of the responses, by making the study completely voluntary in nature, there could still be a certain amount of bias. There could also be some extent of common method bias because as the data were collected from employees within the organisation, they could have incorrectly given a higher or lower value.

In the future, research can be conducted by finding how awareness and training programmes on the CSR initiatives undertaken by the organisation, when given to employees belonging to different income categories, can influence the different types of performance. A pre- and post-study can be conducted to find the influence of training on the model.

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The author declared that no competing interest exist.

## Author's contributions

I declare that I am the sole author of this research article.

## Ethical consideration

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# Appendix 1

## Instrument

### Corporate social responsibility

#### A. Stakeholder

- CSR 1 My company participates in activities that aim to protect and improve the quality of the natural environment.
- CSR 2 My company makes investments to create a better life for future generations.
- CSR 3 My company implements special programmes to minimise its negative impact on the natural environment.
- CSR 4 My company targets sustainable growth, which considers future generations.
- CSR 5 My company supports non-governmental organisations working in problematic areas.
- CSR 6 My company contributes to campaigns and projects that aim to promote the well-being of the society.
- CSR 7 My company encourages its employees to participate in voluntary activities.

#### B. Customer

- CSR 8 My company respects consumer rights beyond the legal requirements.
- CSR 9 My company provides full and accurate information about its products to its customers.
- CSR10 My company gives great importance to customer satisfaction.

#### C. Government

- CSR11 My company always pays its taxes on a regular and continuing basis.
- CSR12 My company complies with legal regulations completely and promptly.

## Performance

#### A. Market performance

- MAR1 There has been an improvement in the company's reputation and image in the market.
- MAR2 There is better alignment between what the company is offering and the consumers' expectations
- MAR3 The company has had success in launching new products.

#### B. Cost performance

- COS1 There was reduction in operation costs – production, distribution and supply chain cost because of green practices.
- COS2 There was reduction in energy costs because of cleaner technology.
- COS3 There was reduction in environmental costs because of green practices.

#### C. Environmental performance

- ENV1 The company has reduced its carbon emission.
- ENV2 The company has reduced its waste water generation.
- ENV3 The company has reduced its solid wastes generation.
- ENV4 The company has decreased its consumption of hazardous/harmful/toxic materials.
- ENV5 The frequency of environmental accidents has reduced.

Note: (i) A 7-point scale was used for CSR and performance – from strongly disagree (1) to strongly agree (7)