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An Overview of BSE FMCG Index Corporate Social Responsibility Initiatives.

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Abstract

Corporate Social Responsibility (CSR) is generated from the belief that organizations have acquired materials, and human resources from society, and must give something in return for its origin. The study is descriptive in nature; it employed quantitative data considering 80 BSE FMCG index companies. The analysis shows that under normal economic condition, the projected spending based on the regulation made through the Companies' Act 2013, exceed the actual spending for the BSE FMCG index. The study further utilized non-probability judgmental sampling; it chooses the top 3 CSR surplus spenders, and the top 3 CSR deficit spenders for comparison. The study then uses profit after tax (PAT) or net profit (NP) as an indicator of financial performance (FP), and CSR spending as a social performance. The finding reveals that there is a significant relationship between social and financial performance of Indian FMCG companies.

Keywords: BSE FMCG Index, Corporate Social Responsibility, Financial Performance.

Introduction

The increasing focus of the government, society, companies, academicians, and overall public in general toward sustainability has motivated us to explore the relationship between CSR and financial performance, and CSR activities concerning to BSE FMCG Index. Since the financial year 2014-15, the FMCG index profitability saw significant growth, which makes it mandatory to spend more on CSR activities. Puchakayala et al., (2023) highlight that companies are growing so large that they can control the environmental resources, and participate in different areas of social life. Therefore, a company has to be well engaged in environmental and societal activities rather the just enjoying profits. Thus, this study analyzes the relationship between the social and financial performance of the BSE FMCG index as of May 2022. The analysis shows the financial health of the BSE FMCG index by analyzing the 3 years average profit as per CSR regulation. Furthermore, judgmental sampling is utilized to make a comparative analysis of 6 companies based on the top 3 average net profit companies, and bottom 3 average net profit companies which have a positive PAT, because the end results of the large and small companies will vary when they are examined separately. Moreover, these papers predict the net profit and CSR spending using trend and regression analysis to forecast the subsequent years. By doing so, this paper will contribute to the business communities and enhance financial success based on social activities. Henceforth, CSR will be termed as social performance (SP).

Social performance has been an important part of economic, social, and environmental development, as it helps in shaping the future of the country. The SP thus becomes an important instrument for honoring the sustainable development goals (SDGs). As it promotes environmentally and socially responsible behavior through the involvement of stakeholders and management. It will also help in achieving equality, peace, and prosperity among its people and the planet through partnerships between various nations. Additionally, Carroll (1979) has defined CSR as "The principle of social responsibility interacts in practices, the method of becoming socially aware, and the measures taken to solve social problems". Hence, according to Wartick and Cochran (1985), companies must validate the social activities that need responsive action and must be followed by genuine performance, even without mandatory government policies. Whereas, Miles (1987) argues that social responsibility must be taken into account, only when it appears to be a logical extension of business strategies and not emerge as an organizational commitment toward society. However, Lins et al., (2017) asserted that in evolving economic conditions, it becomes more difficult for some companies to sustain their SP efforts because it can hamper the firm's creditability. Moreover, due to the rise of firms' participation in SP activities, it becomes

important for smaller firms to study how socially conscious businesses establish a solid reputation with their stakeholders, particularly when the firm's profits are required to support business operations and performance. D'amato et al., (2009) thus said that in the present scenario CSR has been viewed as a strategic approach for increasing the organization's reputation and competitiveness in society. Furthermore, Puchakayala et al., (2023) added this strategy cannot be adopted in the competitive economy if the firms don't enjoy super normal profit as the competitor can spurn from spending in SP activities. Besides, the competitors will use their finances for the extension of their business and can gain a competitive edge. So a mandatory CSR obligation is required in the competitive market.

Maqbool and Hurrah (2020) said that CSR is a strategy for building a network of loyal stakeholders and Cherian et al. (2019) asserted the activities help to improve a company's reputation, social values, and profitability. Additionally, Soewarno (2018) finds that companies' participation specifically in environmental activities boosts the company's image and reputation, because of its positive correlation with financial performance which leads to the growth of a company. Furthermore, Puchakayala et al. (2023) also stated CSR activities prevent employees from engaging in destructive activities, which in turn motivates the employees to participate in more social activities. Thus, this creates a more peaceful working environment and job satisfaction for the employees. Therefore, these activities also result in getting privileges from the government, which helps the company sustain itself in the future. Thus, the present aim of the study is to understand the relationship between SP and financial performance. The study has been carried out to achieve the following objectives: 1) To examine the relationship between social and financial performance of the BSE FMCG index; 2) To study the impact of social performance on financial performance; 3) To highlight the trends in CSR spending; 4) To predict the future trends using trend analysis and regression trend analysis; 5) To make a comparative analysis of large and small firms based on profitability.

Literature review and hypothesis development
Several studies confirmed the presence of a positive relationship between social performance (SP) and financial performance (FP), known as the instrumental stakeholder approach, societal approach, and stakeholder theory. This theory has been proved by various researchers viz. Narver (1971), Freeman (1984), Marrewijk (2000), Baron (2001), Choi et al., (2010), Maqbool and Hurrah (2020). Similarly, their claims are supported by Ullman (1985) who found that women empowerment can be used as a corporate strategy as it has a positive relationship with financial performance. Additionally, Soewarno (2018) claims that engagement of the companies especially in environmental activities is a crucial measure to improve the company image and reputation, this observation is supported by Nyeadi et al., (2018) as governance and putting emphasis on environmental initiatives results in better financial results based on South African companies. Further, Sila (2018) put forth that the use of total quality management results in a positive effect of SP, and it directly results in improvement in the financial and market performance of the company. Moreover, Lam et al., (2019) found that both for-profit and nonprofit microfinance institutions (MFIs) there exists a positive association between social and financial performance. The result suggests that even though the non-profit MFIs have better financial sustainability by extending loans to poorer people, the social and financial performance is significant only for-profit MFIs as the relation is more economically and statistically significant. Therefore based on the above literature, we proposed to hypothesized that
H_1: Social performance (CSR Spending) has a positive impact on financial performance.

Additionally, if the SP initiative meets the needs of the employees, suppliers, customers, management, society, investors, and the state government, it results in image building among society and promotes customer loyalty, which satisfies the management and helps in making effective decisions. Thus, these lead to an increase in goodwill and further motivate the employees which altogether results in better FP (Puchakayala et al., 2023; Feng et al., 2021 a, b). Similarly, the analysis presumes that improving SP activities results in business financial success. Correspondingly, studies done by Sharfman and Fernando (2008); Goss and Roberts (2011) stated that firms with better CSR achievements have a lower cost of capital and has less financial constraints. Moreover, Godfrey et al., (2009); Jo and Na (2012) observed that when an organization indulges in CSR activities it reduces firm risks, as it offers insurance-like protection to the companies. Furthermore, a study conducted by Cornett (2016) stated that the banking sector that is socially responsible towards society has better financial performance, than the banks that are not socially responsible. When SP is taken as a mediating variable, there is a positive relationship between social entrepreneurship orientation (SEO) and FP in Australian firms (Gali et al., 2020). Moreover, Kazemian et al., (2020) stated that when the company knows its target customers and their needs, customer value can create a better social and financial performance. They also asserted that studying the competitor's strategy helps managers to react timely according to the needs of the customer which results in a better social performance. Thus, Chih et al. (2010) concluded that competitive market firms that have an active CSR participation have a competitive edge. Therefore based on the above literature, the second hypothesis is proposed to test that
H_2: Social performance (CSR) enhances financial performance.

Research methodology
Data
This study examines 81 BSE FMCG companies as of May 2022; the analysis is done for the period of 7 years ranging from 2014-15 to 2020-21. Further quantitative research is used which is descriptive in nature. Similarly, based on the recommendation of Saunders et al., (2009) and Taherdoost (2016), judgmental sampling is used to obtain reliable and accurate data from a specific group. Thus, 6 companies namely ITC, Hindustan Unilever Limited, Nestle India Limited, Ross Lifescience Private Limited, Hindustan Foods Limited, and Kokuyo Camlin Limited are selected based on the top 3

average net profit companies, and the bottom 3 average net profit companies having a positive PAT. Additionally, the study comprises secondary sources like annual reports, BSE reports; csr.gov.in, and money control, etc. data which are utilized to examine the relationship between CSP and CFP.

Research Variables
The present study uses two variables to determine the relationship between SP and FP. According to the previous research done by Feng et al., (2021 a,b) and Puchakayala et al., (2023), SP and FP are used as the study variables. This study uses CSR expenditure as an independent variable considering the study done by George et al., (2023) and Puchakayala et al., (2023). The measurement for SP includes the initiative that meets the needs of the employees, suppliers, customers, management, society, investors, and the state government. These measures result in image building among society and promote customer loyalty, which satisfies the management and helps in making effective decisions. Thus, this lead to an increase in goodwill and further motivate the employees which altogether results in better FP. Additionally, profit after tax (PAT) is used as an independent variable as it helps in comprehension of the firm's health, by calculating the NP growth of a firm which is vouched by different researchers viz. Lopez et al., (2007); Cho et al., (2019); Sharma et al., (2020); Kaur and Singh (2020); Bag and Omrane (2020).

Research Models
To study the relationship between SP and FP, simple statistical tools like standard deviation, arithmetic mean, Pearson correlation, percentage and T-test, and graphical representation are employed. Further, trend and regression analysis are used to determine the future trends for social and financial performance (Puchakayala et al., 2023). The analysis considers 14 years which is divided into 7 years from 2014-15 to 2020-21 to analyze the SP and FP. The other 7 years from 2021-22 to 2027-28 are used to predict the future SP and FP.
The following trend lines are constructed based on the past variables, PAT and CSR to predict the future SP and FP.

The future PAT trend:
$$Y_C = a + bx$$
The future CSR spending trend:
$$X_C = a + bx$$
Where,

Y_C = Future PAT trends.

X_C = Future CSR spending trends.

a = Average observations of the given variables.

b = Annual change of the observations in the given variables.

x = Time deviation i.e. it is taken from the middle of the past origin.
Again,
Regression line is constructed to predict the future SP and FP of each other, based on the future PAT and **CSR spending:**
The regression line for PAT on CSR future spending trends:

$$Y - \bar{Y} = byx(X_c - \bar{X})$$

The regression line for CSR on PAT future spending trends:

$$X - \bar{X} = bxy(Y_c - \bar{Y})$$

Where,
Y= Expected PAT for the projected future period of 7 years.
X= Expected CSR for the projected future period of 7 years.

$\bar{Y}$ = Average PAT for the past period of 7 years.

$\bar{X}$ = Average CSR spend trends for the past period of 7 years.

byx = Regression coefficient of Y on X.

bxy = Regression coefficient of X on Y.

X_c = Future projected CSR spending trends for the period of 7 years.

Y_c = Future projected PAT spending trends for the period of 7 years.

Analysis and discussion

The evaluation of the study is conducted in two phases. The first phase deals with the overall analysis of the BSE FMCG Index. The second phase deals with a detailed analysis of the social and financial performance of 6 selected companies.

Part 1: Analysis of BSE FMCG index.

Table 1 represents the overview of the BSE FMCG index based on the requirement prescribed by the Companies Act 2013. The act stated that any organization that has a net worth of Rs. 500 crores or more, revenue of Rs. 1000 crores or more, or a net profit of Rs. 500 crores or more, are required to spend a minimum of 2% of the average net profit generated during 3 immediate preceding years (MCA-GOI 2013). The table contains the PAT or NP average for the past 3 years, the analysis is done for the period of 7 years from 2014-15 to 2020-21. The NP has increased from Rs. 20641.5 Cr in 2014-15 to Rs. 43972.94 Cr in 2020-21.

Table 1: Net profit and CSR spending trends of BSE FMCG index (Amount in INR Core)

PARTICULARS	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Past 3 years avg NP	20641.5	24574.99	27958.06	31821.29	34465.41	38934.99	43972.94
Required prescribed amount	412.83	491.4997	559.1611	636.4258	689.3083	778.6998	879.4589
Actual spending	418.29	540.835	588.615	674.7442	719.3594	806.2192	872.5826
Surplus/Deficit	5.46	49.3353	29.4539	38.31836	30.05114	27.51941	-6.87626
Percentage increase/decrease	1.32	10.03	5.26	6.01	4.35	3.53	-0.78

Source: csr.gov.in

Figure 1 represents CSR spending for the BSE FMCG companies; the figure shows that the projected CSR spending in the financial year 2014-15 is Rs. 412.83 core, which increases to Rs. 879.4589 core i.e. 113.02% over the span of 7 years. The actual CSR spending for the based year 2014-15 is Rs. 418.29 and the end period 2020-21 is Rs. 879.45, results in an increase of 111.64% during the study period. The actual spending of CSR activities by the companies surplus the prescribed spending by 3.89% which amounts to Rs. 173.26 core. Although, during the period of the study from the financial year 2014-15 to 2019-20, the CSR actual spending surplus the prescribed spending for each financial year. The financial year 2015-16 shows a maximum surplus of 10.03% or Rs. 49.33 core, however during the financial year 2020-21 the actual spending is less than the prescribed spending by -0.78% or Rs. 6.87 core. The shortfall is due to covid-19 pandemic and the prevalence of the economic crisis throughout the world.

Figure 1: FMCG index CSR spending (Amount in INR Core)
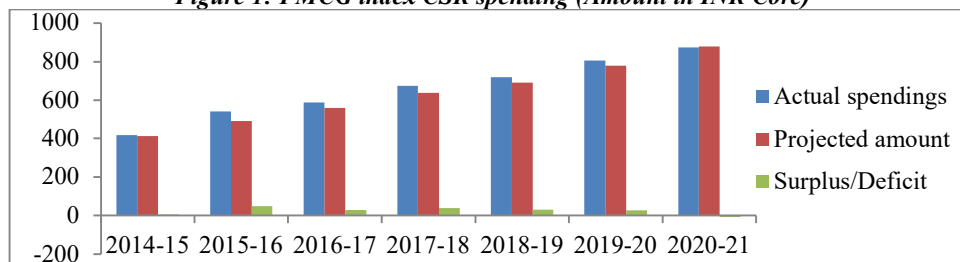

Figure 2 represents the development sectors of BSE FMCG companies based on CSR spending. The vertical axis depicts the amount spend and the horizontal axis shows the development sector for the financial year 2014-15 to 2020-21. The figure shows that BSE FMCG companies diversified their spending on 31 different projects. However, the top 15 projects shown in the above figure amount to 97.33% of the whole CSR project spending, whereas the other 16 projects amount to 2.67% of the whole project. The company's CSR spending reveals that the main focus of development is on healthcare where 25.20% or Rs. 1162.50 Cr is spend, followed by education sector amounting to Rs. 872.39 or 18.91% and Rs.725.81 Cr or 15.73% is used for environmental sustainability initiatives for the given period. Thus, the top 3 development imitative amount to Rs. 2760.7 Cr or 59.84% of the total amount spend.

Figure 2: Development sectors of BSE FMCG companies based on CSR spending.
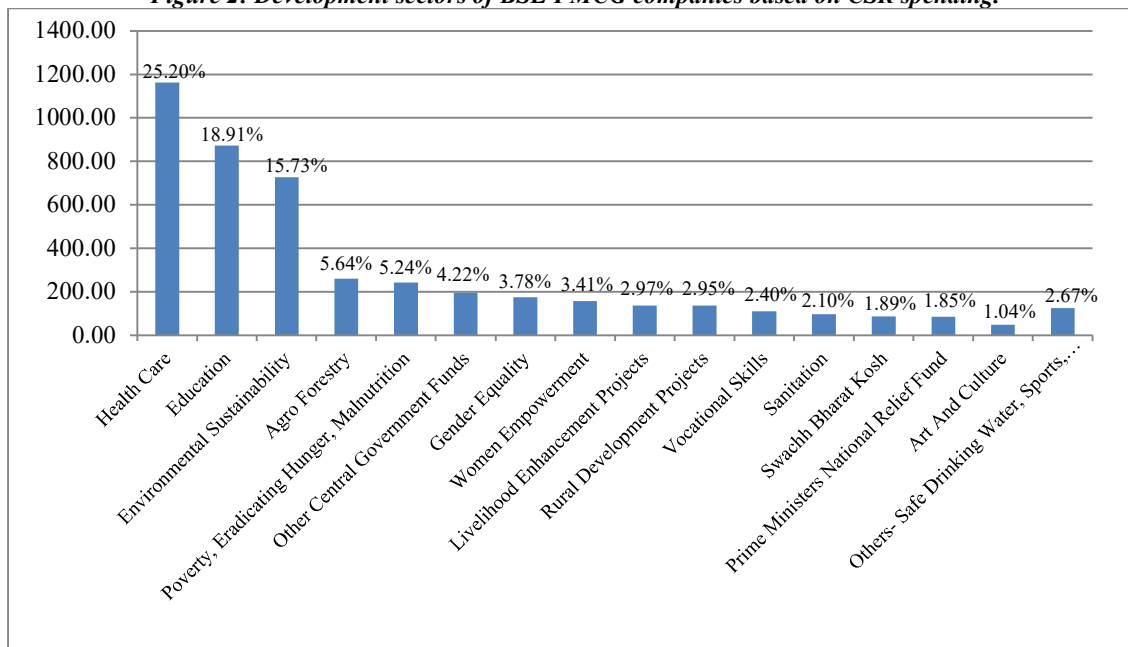
In table 2 an independent sample t-test was conducted to determine the relation between financial performance and CSR spending (social performance). There were significant differences (t (76.09) = 2.152, p=.035) in the score with the mean score for PAT being 2432.49 with a standard deviation of 9223.37. The mean score for CSR spending was 59.32 with the standard deviation 245.27. The FMCG sector company has a very high and significant correlation between CSR and PAT at .99. Thus, in case of hypothesis 1, we reject the null hypothesis and accept the alternate hypothesis. Therefore, social performance has a positive impact on financial performance, as the results are statistically significant.

Table 2: Statistical description of PAT and CSR spend of BSE FMCG companies.

Particulars	BSE FMCG Index
Arithmetic mean	
PAT (Rs. in Cr)	2432.49
CSR (Rs. in Cr)	59.32
Standard deviation	
PAT (Rs. in Cr)	9223.37
CSR (Rs. in Cr)	245.27
Pearson correlation between CSR and PAT	.995
Nature of correlation	Positive
Degree of correlation	Very high
T-value	2.152
Degree of freedom	76.098
Significance value/p-value	.035

Source: Author's calculation

Table 3 shows the future trend and regression values based on the past 7 years CSR spending. The analyses delineate values from the financial year 2021-22 to 2027-28. Trend analysis is a technical analysis that predicts the future movement of a company based on historical and present data. So the rationale behind this analysis is that the past repeats itself, and assumes that what happens in the past, will likely happen in the future under the same circumstances.

Similarly, the regression trend is used in the stock market, to forecast the future price of a stock. This analysis is used to predict the future PAT and CSR spending for the BSE FMCG companies. Regression is a statistical concept that describes how things tend to regress or revert to the mean over time. This concept uses standard deviations to calculate 2 parallel lines, which focus on determining the normal distribution of a dataset. However, the analysis doesn't guarantee future net profit or CSR spending, as the past performance of the companies doesn't guarantee results of future success, as the indicators rely heavily on the historical data, and don't include different factors that can result in a better gains or losses for the company.

The analysis shows that based on the past trend, the future trends of both PAT and CSR surpassed the past profit and CSR spending. The findings show that when the trend value PAT grows, the CSR grows better than the regression trend value. The analysis reveals that the trend value PAT is lower than the regression value PAT, whereas the trend value CSR spending is higher than the regression value CSR spending. Moreover the data also reveals that under normal economic

conditions in the next 7 years based on trend values, the CSR spending amounts to 2.23% of the total 7 years net profit. However, the regression value shows that in the next 7 years, the CSR spending will amount to 1.45% of the BSE FMCG index companies. So, based on the regression value the companies will be reluctant to spend much of their profits for social causes.

Therefore the trend analysis reveals that the improvement in future CSR spending results in the improvement of future profit. Thus, based on the above observation, the null hypothesis is rejected and the alternate hypothesis is accepted for hypothesis 2. Therefore, social performance enhances financial performance and vice versa.

Table 3: Trend and regression analysis of BSE FMCG companies

Particulars	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
Trend values							
PAT	41774.23	46944.67	52513.96	58200.83	64141.8	67016.41	71168.33
CSR	868.2598	925.7398	978.0948	1023.00	1065.943	1168.33	1385.048
Regression values							
PAT	59574.6	58511.19	65471.59	72391.19	79315.11	81996.6	84398.81
CSR	864.04	922.07	983.25	1043.03	1108.11	1165.36	1227.56

Source: Author's calculation

Table 4 Association between net profit and CSR spending based on top 3 maximum average net profits and top 3 minimum average net profits for the period of 2014-15 to 2020-21. The study uses non-probability purposive sampling to choose the selected companies. The firms are selected based on their mean PAT for the period of 7 years i.e. from 2014-15-2020-21. The top 3 PAT firms are selected namely ITC Limited, Hindustan Unilever Limited, and Nestle India Limited. The bottom 3 firms are selected if their mean net profit for the period of 7 years is positive. Therefore, the companies that fulfill the criteria for the bottom average PAT are Ross Lifescience Private Limited, Hindustan Foods Limited and, Kokuyo Camlin Limited. This study analyses the mean, standard deviation, Pearson correlation, and t-value. The measurement is done to understand the scenario between social performance and PAT, where the t-value is used to prove the statistical significance relation for the period of 2014-15 to 2020-21.

From Table 4 we can observe that there is no comparison of ITC Limited in terms of their financial performance and CSR spending. ITC mean PAT is Rs. 11037.45 Cr and CSR spending is Rs. 285.48 Cr, the second top average PAT for 7 years is Hindustan Unilever Limited amount to Rs. 4974.39 Cr and CSR spending Rs. 118.13 Cr followed by Nestle India Limited with an average PAT of Rs. 1365.36 and CSR spending of Rs. 32.22. From this, we can observe that ITC Limited is the most profitable company among the FMCG firms, with its average net profit for 7 years almost double 45.06% of its counterpart Hindustan Unilever Limited.

Additionally the table shows that Hindustan Unilever Limited and Hindustan Foods Limited have a positive relation between social and financial performance. These companies possess a very high degree of correlation, with 0.97 and 0.95 respectively. ITC also has a positive correlation having a high degree of correlation of 0.87. Nestle India Limited and Kokuyo Camlin Limited have a positive correlation and a moderate degree of correlation. Nestle India Limited is the third most profitable FMCG Company whereas; Kokuyo Camlin Limited is the least profitable FMCG Company with a positive net profit for the period of 7 years. So based on Pearson's correlation between social and financial performance, the comparison is done not based on monetary terms, but based on consistency of spending its last 7 years net profit for social benefits. Top earning company doesn't necessarily perform better than the least positive net profit company.

A T-test was conducted to compare the social performance and financial performance of the six companies, the top 3 FMCG companies based on 7years' average net profit gainer have a significance differences all having a p-value of 0.00. Whereas, the least 3 profitable FMCG company with a positive net profit for the period of 7 years shows an insignificant relation between social and financial performance having a p-value > 0.05.

Table 4: Association between net profit and CSR spending based on top 3 maximum average net profits and top 3 minimum average net profits for the period of 2014-15 to 2020-21.

Statistical measures	ITC Limited	Hindustan Unilever Limited	Nestle India Limited	Ross Lifescience Private Limited	Hindustan Foods Limited	Kokuyo Camlin Limited
Arithmetic mean						
PAT (Rs. in Cr)	11037.45	4974.39	1365.36	7.43	6.07	4.21
CSR (Rs. in Cr)	285.48	118.13	32.22	0.13	0.08	0.14
Standard deviation						
PAT (Rs. in Cr)	2164.41	1072.52	551.43	8.98	8.29	8.27
CSR (Rs. in Cr)	43.13	28.36	13.62	0.12	0.15	0.14
Pearson correlation	0.87	0.97	0.65	-0.88	0.95	0.59
Nature of correlation	Positive	Positive	Positive	Negative	Positive	Positive

Degree of correlation	High	Very High	Moderate	High	Very high	Moderate
T-value	13.14	11.98	6.39	2.15	1.91	1.31
Degree of freedom	6.00	6.01	6.01	6.00	6.00	6.00
Significance value/p-value	0.00	0.00	0.00	0.07	0.10	0.24

Source: Author's calculation

Table 5 represent trend and regression trend analysis for 6 FMCG selected companies. The companies are selected from the BSE FMCG index as of may 2022. The data use are collected from the year 2014-2015 to 2019-2020, 6 companies selected are based on top 3 average net profit companies, and bottom 3 average net profit companies from which have a positive PAT.

Table 5: Trend and regression analysis of 6 selected FMCG companies.

Particulars	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
ITC (Trend value)							
PAT	14772.34	15941.32	17275.49	18568.80	19692.26	20700.44	21606.74
CSR	364.07	378.79	394.54	412.74	430.84	448.72	467.50
ITC (Regression value)							
PAT	18419.62	19888.98	21642.32	23160.36	24204.31	25002.82	25631.58
CSR	441.63	449.70	462.34	481.73	500.55	518.67	538.84
HUL (Trend value)							
PAT	6853.39	7452.72	8159.87	8746.49	9244.91	9740.23	10288.44
CSR	170.31	184.78	199.16	213.59	227.87	240.81	254.07
HUL (Regression value)							
PAT	8690.21	9460.76	10425.93	11023.80	11412.30	11831.61	12399.36
CSR	221.56	237.86	253.24	268.51	283.19	294.62	307.27
Nestle (Trend value)							
PAT	2248.78	2676.16	2929.43	3181.27	3418.88	3676.43	3977.24
CSR	55.30	58.33	65.58	72.89	77.63	82.82	88.39
Nestle (Regression value)							
PAT	2111.48	2975.75	3039.90	3159.34	3442.06	3729.25	4084.85
CSR	77.76	76.94	87.40	96.96	99.76	104.25	109.83
Ross Lifescience Private Limited (Trend value)							
PAT	4.33	8.11	9.32	13.03	14.22	14.72	13.64
CSR	0.21	0.21	0.20	0.17	0.17	0.17	0.22
Ross Lifescience Private Limited (Regression value)							
PAT	-3.51	8.37	11.51	21.38	23.31	20.25	12.47
CSR	0.34	0.21	0.17	0.04	0.04	0.08	0.24
Hindustan Foods Limited (Trend value)							
PAT	19.27	23.65	29.22	34.49	38.49	42.34	45.47
CSR	0.31	0.40	0.50	0.60	0.69	0.74	0.81
Hindustan Foods Limited (Regression value)							
PAT	20.51	26.54	32.34	38.17	43.04	44.52	48.52
CSR	0.30	0.42	0.52	0.62	0.73	0.74	0.82
Kokuyo Camlin Limited (Trend value)							
PAT	14.63	13.82	15.87	17.96	18.12	19.60	23.03
CSR	0.38	0.47	0.54	0.61	0.68	0.74	0.81
Kokuyo Camlin Limited (Regression value)							
PAT	17.98	11.80	14.36	17.08	15.33	17.29	23.21
CSR	0.27	0.54	0.60	0.64	0.77	0.82	0.81

Source: Author's compilation

Figure 3 represents ITC's past average PAT from the financial year 2014-15 to 2020-21. The past PAT values are 8,785.21, 9,607.73, 9,844.71, 10,200.90, 11,223.25, 12,464.32, and 15,136.05. The value of the future PAT trend for 7 years is 14772.34, 15941.32, 17275.49, 18568.8, 19692.26, 20700.44, and 21606.74 the trend values increase at a constant rate for the future predicted value. The data also shows that the future trend values are lower than the future regression values for all the predicted period.
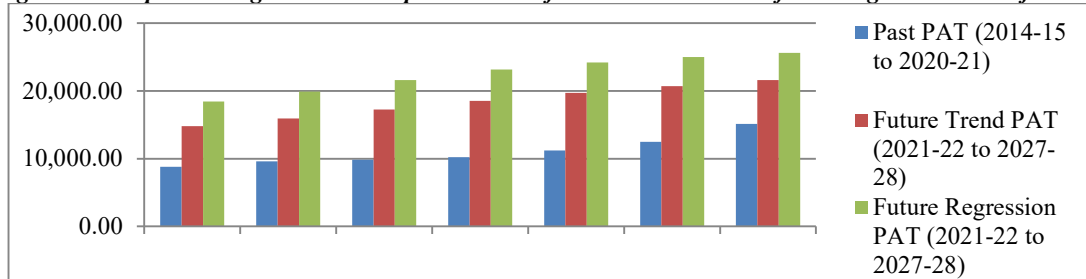
Figure 3: ITC past average PAT in comparision with future PAT trend and future regression value for PAT.

Figure 4 represents ITC's past average CSR from the financial year 2014-15 to 2020-21. The past CSR values are 215.05, 247.5, 275.96, 290.98, 306.95, 326.49, and 335.43. The value of the future CSR trend for 7 years is 364.067, 378.79, 394.544, 412.743, 430.837, 448.721, and 467.5 the trend values increase at a constant rate for the future predicted time. The data also shows that the future trend values are lower than the future regression values 441.63, 449.70, 462.34, 481.73, 500.55, 518.67, and 538.84 for all the predicted periods. From Figures 3 and 4 we can conclude that an increase in net profit result in increase of future CSR spends.

Figure 4: ITC past average CSR in comparision with future CSR trend and future regression value for CSR.
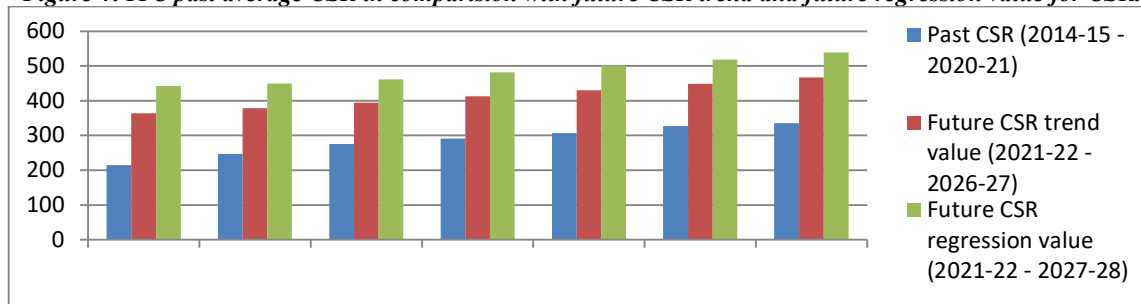
Figure 5 represents Hindustan Unilever Limited's past average PAT from the financial year 2014-15 to 2020-21. The past PAT values are 3,867.49, 4,315.26, 4,137.00, 4,490.00, 5,237.00, 6,036.00, and 6,738.00. The values of future PAT trends for 7 years are 6853.394, 7452.722, 8159.868, 8746.489, 9244.914, 9740.226, and 10288.44. The trend values increase at a constant rate for the future predicted value. The data also shows that the future trend values are lower than the future regression values 8690.212, 9460.765, 10425.93, 11023.8, 11412.3, 11831.61, and 12399.36 for all the predicted period.
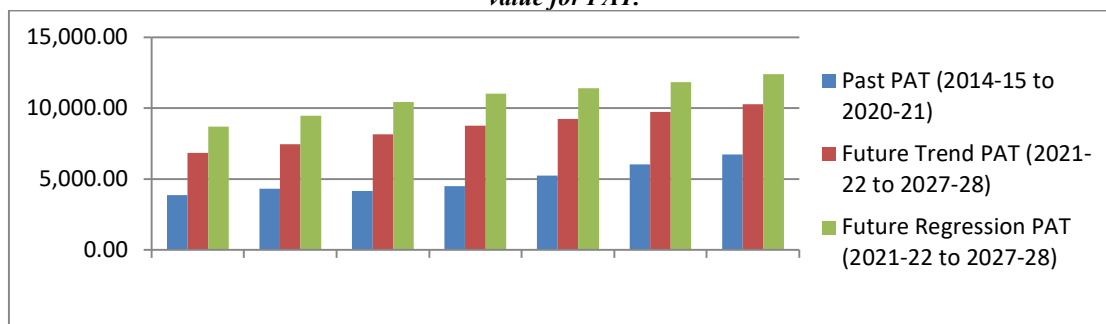
Figure 5: Hindustan Unilever Limited past average PAT in comparision with future PAT trend and future regression value for PAT.

Figure 6 represent Hindustan Unilever Limited's past average CSR, in comparison with future CSR trend and future regression value for CSR, from the financial year 2014-15 to 2020-21. The past CSR values are 82.35, 92.12, 104, 116.09, 126.45, 143.74, and 162.19. The values of future CSR trends for 7 years are 170.30, 184.78, 199.15, 213.59, 227.86, 240.81, and 254.07 the trend values increase at a constant rate for the future predicted time. The data also shows that the future trend values are lower than the future regression values 221.55, 237.86, 253.23, 268.51, 283.18, 294.62, and 307.26 for all the predicted periods. From figures 5 and 6, we can conclude that increases in net profit result in increase of future CSR spend.

Figure 6: Hindustan Unilever Limited past average CSR in comparision with future CSR trend and future regression value for CSR.
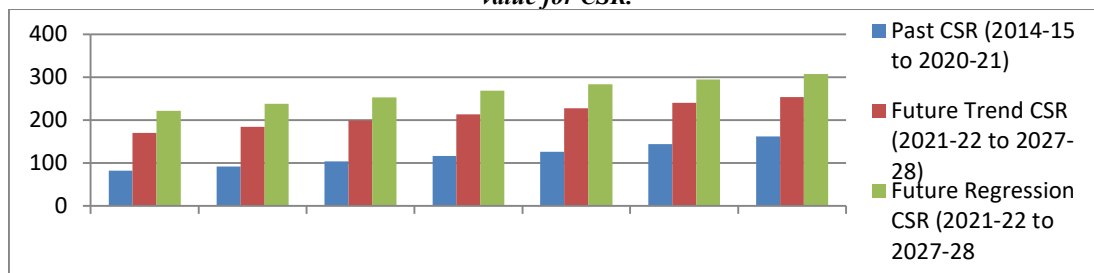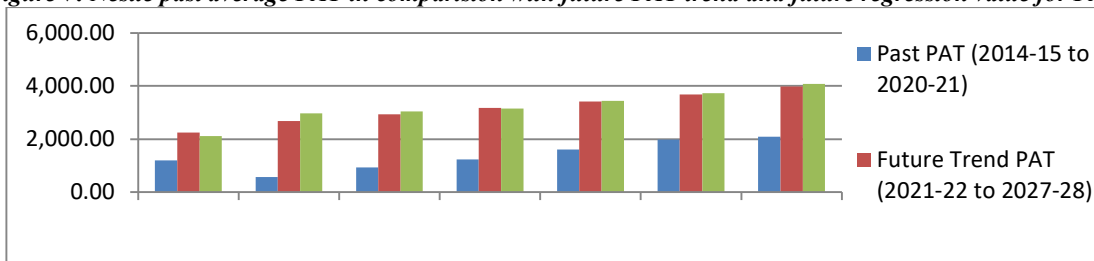

Figure 7 represent Nestlé's past average PAT in comparison with future PAT trend and future regression value for PAT, from the financial year 2014-15 to 2020-21. The past PAT values are 1,184.69, 563.27, 926.54, 1,225.19, 1,606.93, 1,968.44, and 2,082.43. Even though the past PAT has substantially decreased in the financial year 2015-16, it increased at a fast pace in the following year. So, the value of the future PAT trend for 7 years is 2248.777, 2676.16, 2929.42, 3181.26, 3418.88, 3676.43, and 3977.24 which increase at a constant rate for the future predicted value. It also shows that a one-year decline in PAT doesn't have any impact on the future trend and regression value. The regressions are 2111.47, 2975.75, 3039.90, 3159.34, 3442.05, 3729.25, and 4084.85 for the predicted period.

Figure 7: Nestle past average PAT in comparision with future PAT trend and future regression value for PAT.

Figure 8 represent Nestle's past average CSR in comparison with future CSR trend and future regression value for CSR, from the financial year 2014-15 to 2020-21. The past CSR values are 8.51, 29.89, 29.89, 26, 36.39, 44.11, and 50.73. The values of future CSR trends for 7 years are 55.30, 58.33, 65.57, 72.89, 77.62, 82.81, and 88.39 the trend values increase at a constant rate for the future predicted time. The data also shows that the future trend values are lower than the future regression values of 77.76, 76.94, 87.40, 96.96, 99.75, 104.24, and 109.83 for all the predicted periods. From figures 5 and 6, we can conclude that an increase in net profit results on increase in future CSR spend.

Figure 8: Nestle past average CSR in comparision with future CSR trend and future regression value for CSR.
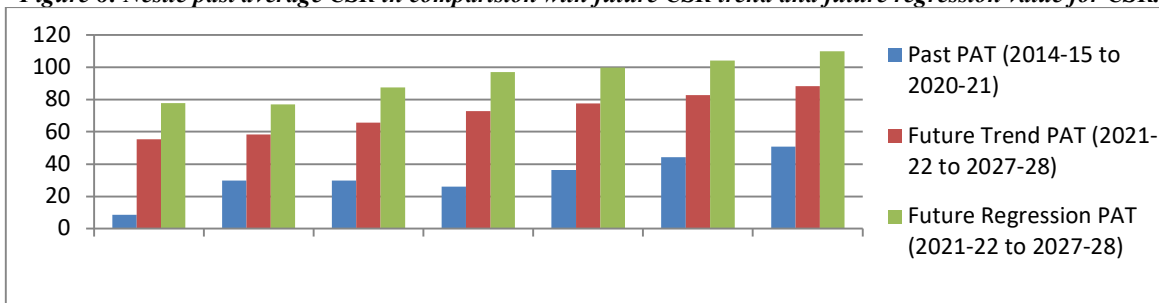

Figure 9 represents Ross Lifescience Private Limited's past average PAT, in comparison with future PAT trend and future regression value. The figure shows that the past PAT is inconsistent, the year 2014-15 saw the most profit with Rs. 20.40 CR, while in the year 2017-18, the PAT was negative and increased in the year 2021-21. The future PAT trend value amount 4.33, 8.11, 9.32, 13.03, 14.22, 14.72, and 13.64 predict a positive PAT for the period of 7 years and increase at a constant rate. The regression value depict a negative PAT in the year 2021-22 with a value of Rs. -3.51 Cr, the amount gradually increases from 2022-23 to 2025-26 and then decreases but remain positive.

Figure 9: Ross Lifescience Private Limited past average PAT in comparision with future PAT trend and future regression value for PAT.
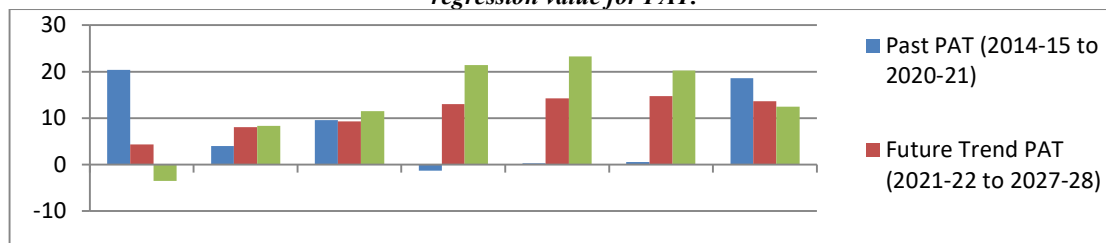

Figure 10 represent Ross Lifescience Private Limited's past average CSR in comparison with future CSR trend and future regression value. The figure shows that based on the past average CSR spend the future spending trend and the future regression trend are positive. The analysis also shows that the trend value is much higher than the average value. So, when there is a positive trend and regression PAT value the CSR spend will also be positive in the future.

Figure 10: Ross Lifescience Private Limited past average CSR in comparision with future CSR trend and future regression value for CSR.
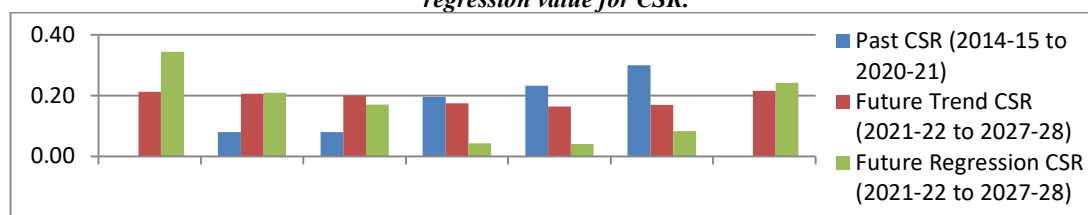

Figure 11 represents Hindustan Foods Limited's past average PAT in comparison with future PAT trends and future regression values. The past PAT value shows a significant increase from the based year 2014-15 where the net profit for the year was negative. The amount grew substantially from Rs. -1.33 in 2014-15 to Rs. 22.73 in 2020-21. The trend and regression trend value show a huge potential for the company as the PAT grew each year for the predicted period.

Figure 11: Hindustan Foods Limited past average PAT in comparision with future PAT trend and future regression value for PAT.
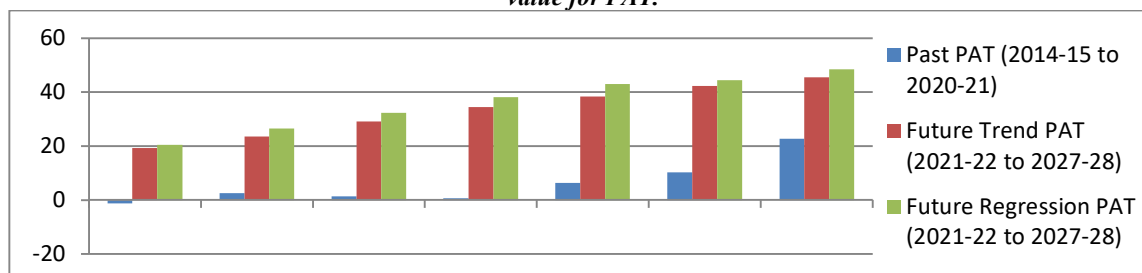

Figure 12 represent Hindustan Foods Limited's past average CSR in comparison with future CSR trend and future regression value. From Figure 11 we can see that the past PAT became positive from the year 2015-16, the company only fulfilled the Companies Act, 2013 framework for CSR spending in the financial year 2019-20, but we can see a huge improvement in CSR spending in 2020-21. From the past average spending the trend and regression value show that the company's CSR spendings will drastically increase and become consistent for the predicted period.

Figure 12: Hindustan Foods Limited past average CSR in comparision with future CSR trend and future regression value for CSR.
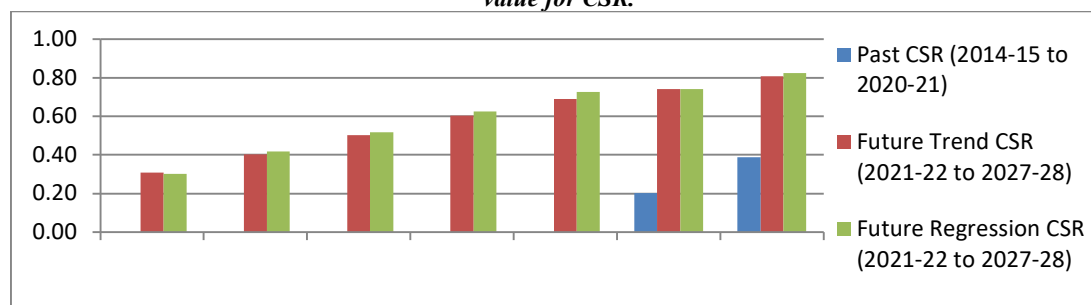
Figure 13 shows that the company has an inconsistent performance in terms of PAT or has a volatile performance. The past PAT values are -11.58, 4.92, 5.26, 1.50, 9.82, 15.20 and 4.36 respectively. The future trend also shows an erratic PAT performance the values are 14.63, 13.82, 15.87, 17.96, 18.12, 19.60, and 23.03 respectively. The trend regression analysis also shows the same result where the performance of the company PAT becomes reliable and predictable from the year 2025-26 to 2027-28. The above figure also shows the growth in the company PAT, as CSR and PAT has a very high degree of correlation the growth predicts an improve in CSR spending amount in the future.

Figure 13: Kokuyo Camlin Limited past average PAT in comparision with future PAT trend and future regression value for PAT.
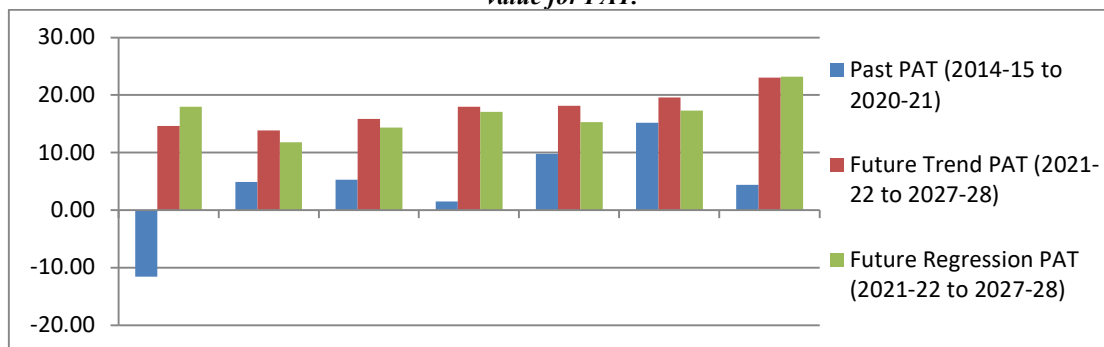

Figure 14 shows that the company's CSR spending starting from the financial year 2016-17 with Rs. 0.04 Cr. The spending increased at an increasing rate till 2020-21 to Rs.0.33 Cr. The figure also shows that the future trend and regression trend value, for the company increase overtime at a consistent rate. The future CSR trend values are 0.38, 0.47, 0.54, 0.61, 0.68, 0.74 and 0.81 respectively. Whereas, the Future regression trend values are 0.27, 0.54, 0.60, 0.64, 0.77, 0.82, and 0.81.

Figure 14: Kokuyo Camlin Limited past average CSR in comparision with future CSR trend and future regression value for CSR.
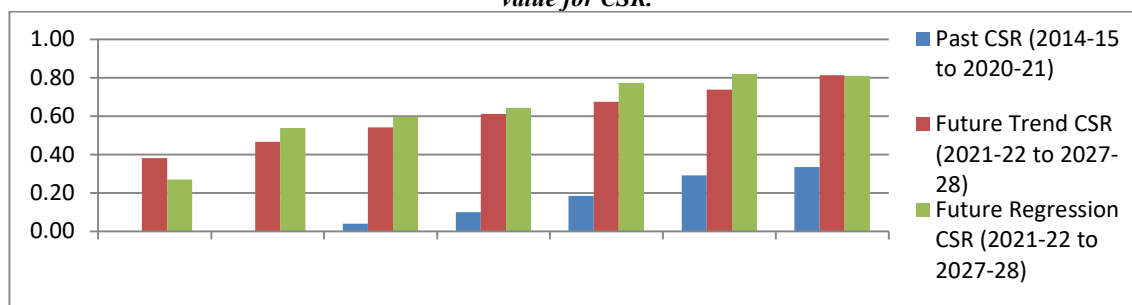
Conclusion, Discussion, and Managerial implication.

The study mainly focused on the conduct of the BSE FMCG companies toward the improvement of society. The study is based on CSR spending which aims at generating value to society, individuals, or a group of individuals. The analysis reveals that when the future CSR spending increases, the future PAT tends to increase at the same time. Therefore the trend analysis reveals that the improvement in future CSR spending results in the improvement of future profit. These findings can be used as a reminder for all the companies that by adapting or spending for social causes, the companies benefited from the initiative. The action can be used as an approach to fulfill the stakeholder theory proposed by Freeman (1984), stating that, an organization has to create as much value for its stakeholders while managing individual interests. Additionally Narver (1971) also added voluntary engagement in social activities will pave the way for organizational development. Similarly, Maqbool and Hurrah (2020) revealed that CSR is a strategy toward building a network of loyal stakeholders. Thus, Maqbool and Zameer (2018) support their claims by stating that CSR must be used as a business strategy that can benefit the company in the long run. The statement proposed by Maqbool and Zameer (2018) is evident from the companies like ITC, HUL and Nestle by taking the average net profit from 2014-15 to 2020-21, the CSR spending based on average net profit are more than 2%. Therefore the companies that benefited from spending in CSR activities will motivate smaller or less financially capable companies to adopt CSR as a corporate strategy.

Further, the BSE FMCG index manifested the presence of very high degree of correlation between social and financial performance. But when the companies under the index are being studied individually the result varies with a very high, high, moderate, and even a negative correlation. As a result the analysis suggested that there is a high chance of having volatile results. Similarly the studies done by Maqbool and Zameer (2018), Siueia et al., (2019), and Bag and Omrane (2020) found a positive impact between CSR and financial performance. Whereas studies performed by Vurro and Pereini (2001), Sekhon and Kathuria (2019) found a negative relationship. Additionally, the study did by Okafor et al. (2021)

reveals a mixed conclusion. Therefore, Herrera and Heras-Rosas (2020) stated that for any company to benefit from CSR or social activities, they have to undertake the activities as a necessity and with a genuine concern for society and not only to comply with the law.

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