International Journal of Advanced Research in Commerce, Management & Social Science (IJARCMSS)
ISSN : 2581-7930, Impact Factor : 5.880 , Volume 04, No. 01, January - March, 2021, pp 326-338

AN EMPIRICAL ANALYSIS OF THE PATTERN OF CSR EXPENDITURE IN INDIA

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ABSTRACT

In this paper, an attempt has been made to understand and explain the concept of corporate social responsibility, especially in the light of the set of legal provisions that now mandates CSR spending by companies that meet the criteria specified under Section 135 of the Companies Act 2013, and to empirically analyse the annual CSR spending pattern of the states, union territories and regions in India. The results of the statistical tests used in the study indicate that in India, the amount of CSR expenditure has been more or less the same each year across the states, union territories and regions. However, the analysis also reveals unbalanced overall CSR spending across regions in India, thereby pointing to the need for further government intervention in this respect.

Keywords: *CSR, Pattern of CSR Spending, Sec 135, Companies Act, Effects of Legal Mandate of CSR.*

Introduction

On 1st April 2014, with the implementation of the Companies Act 2013, India made history by becoming the first country in the world to make corporate social responsibility (CSR) initiatives mandatory by law. This step not only indicated the government's intention to make corporates accountable for the impact of their business activities on the society at large, but also reaffirmed the government's commitment towards achieving sustainable inclusive growth in the long run. Even before the government decreed CSR spending as a legal mandate, many corporate stalwarts have historically been involved in community and public welfare programs that are viewed as a vital part of the larger goal of corporate philanthropy. Business entities do recognise that the benefits associated with active involvement in public welfare outweigh the associated costs, nevertheless, the areas of CSR contribution have been largely disproportionate. As a consequence, the achievement of sustainable, all-inclusive growth in India continues to remain an elusive concept. Therefore, the introduction of the legal mandate in respect of CSR is expected to ensure focused harmonization of the collective efforts in the direction of public welfare, that will eventually translate into realization of the larger objective of holisticand sustainable growth. It shall also ensure that more corporates come within the ambit of CSR spending and fulfil the role of responsible corporate citizens that believe in giving back to the very society that hasnurtured their sustained growth over the years.

Objectives of the Study

There are two broad objectives of this study. Firstly, we aim to understand the concept of corporate social responsibility from the perspective of the legal framework in India. Secondly, we aim to analyse empirically the pattern of CSR expenditure in the country on an overall basis, as well as across states, union territories and regions in India.

Conceptual Framework

- **Concept**

The concept of corporate social responsibility emerged in 1970s. Let us consider some of the prominent definitions and viewpoints on CSR that have been expressed at the global level. In its Green Paper titled 'Promoting a European framework for Corporate Social Responsibility', the European Union defined corporate social responsibility as a company's voluntary endeavour to integrate social and

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environmental concerns in its business operations and stakeholder interactions. This perspective calls for companies to go beyond mere compliance with legal obligations and to actively consider increasing their stake in human capital, environment-friendly processes and stakeholder relations.[1] Similarly, the United Nations Industrial Development Organization (UNIDO), is of the view that corporate social responsibility is a "management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders." The key CSR issues identified by the UNIDO include environmental management, eco-efficiency, responsible sourcing, stakeholder engagement, labour standards and working conditions, employee and community relations, social equity, gender balance, human rights, good governance, and anti-corruption measures.[2]John Elkington (1994) went ahead and coined a new theory by viewing corporate social responsibility as an effective implementation of the Triple Bottom Line (TBL), which gauges a corporation's success in terms of its ability to achieve a balance between social concerns, environmental concerns and level of profits. It promulgates the idea that an entity's bottom-line is composed of three elements – profits, people and planet.[3]The need for companies to adopt socially responsible practices to achieve sustainable development was further reaffirmed by the International Standards Organization (ISO), in its ISO 26000 standards.The standard does not touch upon the subject of corporate social responsibilitydirectly, but highlights the principles underlying the concept of social responsibility, namely, accountability, transparency, ethical behaviour, respect for stakeholder interests, respect for the rule of law, respect for international norms of behaviour, and respect for human rights.[4]

- **Legal Framework for Corporate Social Responsibility in India**

Realizing the need to place CSR in a legal framework, the Indian government took various measures, the first being the 11th Five-Year Plan, in which it announced a slew of policy initiatives to achieve "faster, more inclusive and sustainable growth". In a sense, this laid the foundation stone for subsequent, focused initiatives that aimed to achieve social and economic empowerment of the people.[5]Thereafter, in 2009, Guidelines on Corporate Social Responsibility were issued by the Ministry of Corporate Affairs (MCA), but these were purely voluntary in nature. These guidelines outlined the fundamental principles and core elements that should guide the process of CSR policy development and implementation.[6]Further, in July 2011, the MCA issued the National Voluntary Guidelines (NVGs) on Social, Environmental and Economic Responsibilities of Business, and suggested a framework for reporting the same in the form of a Business Responsibility Report. These guidelines outlined 9 principles together with their core elements that could help organizations strategize their operations in consonance with socially responsible practices.[7]In consideration of the larger interest of public disclosure, in August 2012, the Securities and Exchange Board of India (SEBI) mandated listed entities to include Business Responsibility Reports as a part of their Annual Reports with effect from financial year ending on or after 31st December 2012. This was the first major step towards mandatory reporting on CSR activities.[8]

In 2013, the Companies Act was revamped; the old 1956 Act was replaced with the Companies Act 2013, wherein spending on CSR activities became a legal mandate with effect from 1st April 2014. As per Section 135 of the The Companies Act, 2013, every company having net worth of Rs 500 crores or more, or turnover of Rs 1,000 crore or more, or net profit of Rs 5 crore or more during the immediate preceding financial year, must have a CSR committee and spend at least 2% of the average net profits earned during three immediate preceding financial years to CSR activities. This essentially marked a historic shift from the erstwhile voluntary spending on CSR activities to compulsory spending. Let us have a brief overview of provisions relating to CSR.Section 135 of the Companies Act 2013 contains pertinent CSR provisions such as constitution of CSR Committee at company level, formulation of CSR policy, minimum spending amount and disclosure requirements. Section 134 and Schedule III of the Companies Act 2013 mandate CSR disclosures in the Board of Directors' Report and Statement of Profit and Loss respectively. Schedule VII of the Companies Act 2013 provides a list of CSR activities towards which companies can direct their earmarked funds, such as activities relating to eradication of poverty, hunger and malnutrition; promotion of education, gender equality, women empowerment, environmental sustainability, protection of national heritage, expenditure to combat covid etc. Companies(Corporate Social Responsibility) Rules, 2014 (including subsequent amendments issued by the Ministry of Corporate Affairs) contains further clarifications pertaining to conduct of CSR activities by companies.

Review of Literature

There have been numerous studies and empirical researches on corporate social responsibility and the various aspects surrounding it. The conclusions of some the recent studies have been reviewed below in brief:

Dharmapala and Khanna (2016)[9] analysed the impact of Section 135 of the Companies Act 2013 on CSR spending of selected firms over 2012-2015 using difference-in-difference approach. Their study concluded that firms that had been spending less than the mandated 2% of net profit on CSR increased their spending, and firms that had been spending more than the mandated 2% of net profit on CSR reduced their spending with the implementation of the law. Further, their research also pointed to the occurrence of a 'substitution effect' whereby firms reduced their discretionary advertisement expenditures to finance the mandated spending on CSR activities.

Verma and Kumar (2014)[10] analysed the CSR expenditure made by 30 Indian companies during 2001 to 2012 to gauge the pattern of CSR spending towards various activities. The results of their analysis showed that the voluntary contribution of companies was relatively low as compared to their annual earnings. The research also concluded that fewer companies allocated CSR spending on environmental and pollution control activities.

Bansal and Rai (2015)[11] sought to understand the factors determining level of CSR expenditure by Indian firms by analysing the data of 1,957 firms for financial year 2012-13. Their research indicated the existence of an endogenous relationship between CSR spending and profitability of Indian companies, and concluded that environmental performance, firm size, industry type and profitability were the key factors that explained the amount of CSR expenditure made by a company. The results of their analyses revealed a positive relationship between firm size and CSR spending, and between profitability and CSR spending. The industry type determined the level of environmental performance of a company, and therefore, the study concluded that there was a negative relationship between a company's environmental performance and level of CSR spending.

Kapoor and Dhamija (2017)[12] assessed the CSR spending data of 374 listed companies during 2014-15 in order to assess the impact of the provisions of the newly implemented Companies Act 2013 that made CSR spending mandatory for companies. The results of the data analysis revealed that during the maiden year of implementation of the legal mandate, the total amount spent on CSR activities was 74% of the required amount. 44% of the companies analysed were found to have spent more than the required amount, whereas 56% of the companies were found to have failed to spend the required amount on CSR activities. Further, the study revealed that the CSR expenditure of MNCs was the highest, and the CSR expenditure by PSUs was the lowest.

Mukherjee and Bird (2016)[13] assessed the survey responses of 223 Indian companies obtained between November 2014 and January 2015 to understand various aspects surrounding CSR expenditure in India, specifically the drivers, barriers as well as areas of CSR spending. Their study revealed that improvement in company's public image and employee satisfaction served as the motivating factors for CSR spending, as opposed to a moral perspective that is generally assumed. This finding was further substantiated by the fact that companies tend to concentrate their CSR spending on activities related to employee training, development and health, in a bid to increase employee satisfaction, which in turn, benefitted the company alone, as opposed to the expectation of benefitting the society at large.

Lin et. al. (2009)[14] conducted a study to explore the relationship between CSR and firm performance by analysing the data of top 1,000 Taiwan-based companies during the period 2002-2004 using regression analysis. Their findings revealed that firms view CSR initiatives as a liability if their social objectives are not aligned with their business objectives. Further, CSR spending was found to have significant and positive long-term impact on the performance of a firm, provided the firms were careful in selecting only those CSR programs that complemented their long-term growth strategies in the best way possible.

Research Methodology

- **Objectives of the Study**

The objectives of the study are to analyse the pattern of CSR expenditure in the country on an overall basis, as well across the states, union territories and regions in India. The objectives have been described below:

Objective 1

To analyse empirically whether there is a statistical difference in the year-on-year annual expenditure on CSR activities in India (states and union territories combined).

Objective 2

To analyse empirically whether there is a statistical difference in the annual expenditure on CSR activities amongst the 29 states in India.

Objective 3

To analyse empirically whether there is a statistical difference in the annual expenditure on CSR activities amongst the 7 Union Territories in India.

Objective 4

To analyse empirically whether there is a statistical difference in the annual expenditure on CSR activities across regions in India.

Objective 5

To analyse empirically whether there is a statistical difference in the CSR expenditure of the 6 regions in India.

- **Design of the Study**

The study aims at analysing the annual expenditure on CSR activities made in India. Accordingly, the paper seeks to test the following hypotheses:

Hypothesis 1

H_0: There is no statistically significant difference in the year-on-year annual expenditure on CSR activities in India (i.e., all states and union territories combined).

H_1: There is a statistically significant difference in the year-on-year annual expenditure on CSR activities in India (i.e., all states and union territories combined).

Hypothesis 2

H_0: There is no statistically significant difference in the annual expenditure on CSR activities amongst the 29 states in India.

H_1: There is a statistically significant difference in the annual expenditure on CSR activities amongst the 29 states in India.

Hypothesis 3

H_0: There is no statistically significant difference in the annual expenditure on CSR activities amongst the 7 Union Territories in India.

H_1: There is a statistically significant difference in the annual expenditure on CSR activities amongst the 7 Union Territories in India.

Hypothesis 4

H_0: There is no statistically significant difference in the annual expenditure on CSR activities across regions in India.

H_1: There is a statistically significant difference in the annual expenditure on CSR activities across regions in India.

Hypothesis 5

H_0: There is no statistically significant difference in the CSR expenditure of the 6 regions in India.

H_1: There is a statistically significant difference in the CSR expenditure of the 6 regions in India.

Selection of Statistical Data

The data pertaining to the annual expenditure on CSR activities in India has been adopted from the National Corporate Social Responsibility Data Portal, owned and maintained by the Ministry of Corporate Affairs, Government of India. India is composed of 29 states and 7 union territories. Further, the states and union territories have been grouped into six regions, namely, Central, East, North, North East, South and West, on the basis of the criteria used for setting up of Zonal Councils in India under the States Re-organization Act, 1956.[15] The names of the 29 states and 7 union territories in India, the amount of CSR expenditure during FY 2014-15 to 2018-19 and the composition of each of the regions has been provided below:

Data used in the Analysis for the Period
CSR Expenditure during Financial Years 2014-15 to 2018-19

S. No.	States/UTs	Identification	Region	2014-15	2015-16	2016-17	2017-18	2018-19
1	Andhra Pradesh	State	South	414.27	1294.28	753.52	275.27	643.65
2	Arunachal Pradesh	State	North East	11.04	1.48	24.04	12.13	24.49
3	Assam	State	North East	134.78	164.60	269.91	86.22	205.60
4	Bihar	State	East	36.68	124.61	100.77	46.50	136.43
5	Chhattisgarh	State	Central	161.30	241.16	84.94	71.78	135.52
6	Goa	State	West	27.11	30.15	37.88	53.33	46.73
7	Gujarat	State	West	313.44	551.42	870.84	775.14	1059.41
8	Haryana	State	North	187.40	375.61	389.65	265.58	334.73
9	Himachal Pradesh	State	North	10.94	52.28	24.03	60.60	79.97
10	Jammu And Kashmir	State	North	43.70	107.80	42.84	46.43	35.25
11	Jharkhand	State	East	79.56	117.03	95.69	45.91	70.26
12	Karnataka	State	South	403.46	784.65	887.68	1034.03	1222.44
13	Kerala	State	South	68.23	148.13	135.47	167.23	386.03
14	Madhya Pradesh	State	Central	141.88	185.50	290.59	147.24	245.68
15	Maharashtra	State	West	1445.91	2052.23	2492.10	2549.25	2846.73
16	Manipur	State	North East	2.44	6.27	12.34	4.03	7.64
17	Meghalaya	State	North East	3.53	5.58	10.96	5.48	16.67
18	Mizoram	State	North East	1.03	1.07	0.08	0.22	0.10
19	Nagaland	State	North East	1.11	0.95	0.92	0.36	2.11
20	Odisha	State	East	252.18	624.04	316.72	472.57	682.60
21	Punjab	State	North	55.60	69.92	75.82	89.32	164.54
22	Rajasthan	State	North	299.75	501.45	325.15	263.83	546.29
23	Sikkim	State	North East	1.19	1.98	6.82	6.84	4.58
24	Tamil Nadu	State	South	539.63	633.23	550.93	627.75	823.38
25	Telangana	State	South	101.96	265.40	259.87	293.53	422.03
26	Tripura	State	North East	1.33	1.47	1.25	1.83	23.06
27	Uttar Pradesh	State	Central	148.90	423.79	328.31	302.91	476.95
28	Uttarakhand	State	Central	74.79	73.16	102.52	86.64	173.32
29	West Bengal	State	East	194.85	415.41	290.34	299.76	366.59
30	Andaman And Nicobar	Union Territory	South	0.29	0.55	0.83	0.75	0.43
31	Chandigarh	Union Territory	North	1.77	5.34	21.98	20.50	11.72
32	Dadra and Nagar Haveli	Union Territory	West	4.41	12.02	7.57	6.93	13.47
33	Daman and Diu	Union Territory	West	20.05	2.42	2.63	20.09	6.22
34	Delhi	Union Territory	North	237.43	493.33	521.15	558.32	662.27
35	Lakshadweep	Union Territory	South	0.00	0.30	0.00	2.07	0.39
36	Puducherry	Union Territory	South	2.02	6.46	7.42	6.52	8.27

- **Econometric Techniques Used**

There are several statistical and mathematical models, which may be used to test the hypothesis of significant relationships between the variables (or data items) under study. The selection of a statistical test depends upon the nature of the data being analysed as well as the satisfaction of the assumptions underlying the test.

Parametric tests comprise of the set of statistical tests that make certain assumptions about the parameters of the population from which the sample is drawn. Parametric tests are applicable on scale data that is normally distributed and exhibits homogeneity of variances. These tests are statistically more powerful in comparison to non-parametric tests as they offer greater insights on the population from which the samples are drawn. In this research paper, One-Way Analysis of Variance (ANOVA) is a parametric test that has been used to test the existence of statistically significant differences in the means of two or more unrelated (independent) groups.

Non-parametric tests comprise of the set of statistical tests that do not make assumptions about the nature of the population from which the samples are drawn. These are also known as "distribution-free" statistical tests and serve as an alternative to parametric tests when the data does not satisfy the conditions required by parametric tests. In simple words, non-parametric tests are performed in respect of data that is not normally distributed and does not exhibit homogeneity of variances. In this research paper, Kruskal-Wallis test is a non-parametric test that has been performed to ascertain whether k samples originate from the same distribution, as far as their measures of central tendencies are concerned.

Further, Shapiro-Wilk and Kolmogorov-Smirnov tests have been performed to ascertain whether sample data has been drawn from a population that is normally-distributed; and Levene's test of equality of variances has been performed to test for homogeneity of variances.

Empirical Analysis and Interpretation

The observed data values have been analyzed using suitable statistical techniques. We first have a look at the results; thereafter, we discuss the interpretation.

- **Results of analysis**

  The results of the hypotheses tested have been shown below:

  - **Results of test of hypothesis 1**

We are testing for the null hypothesis that there is no statistically significant difference in the year-on-year annual expenditure on CSR activities in India (i.e., all states and union territories combined).

Exhibit A: Tests of Normality

FY (at all-India level)	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
FY 2014-15	0.283	36	0.000	0.578	36	0.000
FY 2015-16	0.260	36	0.000	0.671	36	0.000
FY 2016-17	0.285	36	0.000	0.577	36	0.000
FY 2017-18	0.302	36	0.000	0.537	36	0.000
FY 2018-19	0.270	36	0.000	0.627	36	0.000

Exhibit B: Tests of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
CSR_Exp_India	Based on Mean	1.459	4	175	0.217
	Based on Median	0.801	4	175	0.526
	Based on Median and with adjusted df	0.801	4	153.537	0.527
	Based on trimmed mean	1.132	4	175	0.343

Since the p-values in Shapiro-Wilk as well as Kolmogorov-Smirnov tests of normality do not exceed 0.05, we reject the null hypothesis for the test of normality and thereby conclude that the data is not normally distributed. The results of the Levene's test of homogeneity of variance reveals that the variances of each group are almost the same, thereby indicating that our assumption of homogeneity of variances has been met. Accordingly, we have applied a non-parametric test (Kruskal-Wallis test) to test our hypothesis.

Exhibit C: Kruskal-Wallis Test

Ranks

	Financial Year	N	Mean Rank
CSR_Exp_India	FY 2014-15	36	79.13
	FY 2015-16	36	92.08
	FY 2016-17	36	92.07
	FY 2017-18	36	89.25
	FY 2018-19	36	99.97
	Total	180	

Test Statistics[a,b]

	CSR_Exp
Kruskal-Wallis H	2.992
df	4
Asymp. Sig.	0.559

a. Kruskal Wallis Test

b. Grouping Variable: FY

We observe that the mean ranks of the annual expenditure on CSR activities was the highest in "FY 2018-19" and lowest in the "FY 2014-15". The data does not provide us with evidence to reject the null hypothesis (p-value 0.559 > 0.05) and we conclude that there is no significant difference in the year-on-year annual expenditure on CSR activities in India (i.e., in states and union territories combined) across the years under study.

- **Results of test of hypothesis 2**

We are testing for the null hypothesis that there is no statistically significant difference in the annual expenditure on CSR activities amongst the 29 states in India.

Exhibit D: Tests of Normality						
FY (with reference to States)	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
FY 2014-15	0.266	29	0.000	0.605	29	0.000
FY 2015-16	0.239	29	0.000	0.704	29	0.000
FY 2016-17	0.272	29	0.000	0.598	29	0.000
FY 2017-18	0.309	29	0.000	0.555	29	0.000
FY 2018-19	0.252	29	0.000	0.652	29	0.000

Exhibit E: Tests of Homogeneity of Variance					
		Levene Statistic	**df1**	**df2**	**Sig.**
CSR_Exp_State	Based on Mean	1.069	4	140	0.374
	Based on Median	0.641	4	140	0.634
	Based on Median and with adjusted df	0.641	4	122.707	0.634
	Based on trimmed mean	0.889	4	140	0.472

Since the p-values in Shapiro-Wilk as well as Kolmogorov-Smirnov tests of normality do not exceed 0.05, we reject the null hypothesis for the test of normality and thereby conclude that the data is not normally distributed. The results of the Levene's test of homogeneity of variance reveals that the variances of each group are almost the same, thereby indicating that our assumption of homogeneity of variances has been met. Accordingly, we have applied a non-parametric test (Kruskal-Wallis test) to test our hypothesis.

Exhibit F: Kruskal-Wallis Test			
Ranks			
	Financial Year	N	Mean Rank
CSR_Exp_State	FY 2014-15	29	62.86
	FY 2015-16	29	76.17
	FY 2016-17	29	74.07
	FY 2017-18	29	69.86
	FY 2018-19	29	82.03
	Total	145	
Test Statistics[a,b]			
		CSR_Exp_State	
Kruskal-Wallis H		3.377	
df		4	
Asymp. Sig.		0.497	

a. Kruskal Wallis Test
b. Grouping Variable: FY

We observe that the mean ranks of the annual expenditure on CSR activities by the Indian states was the highest in "FY 2018-19" and lowest in the "FY 2014-15". The data does not provide us with evidence to reject the null hypothesis (p-value 0.497> 0.05) and we conclude that there is no statistically significant difference in the year-on-year annual expenditure on CSR activities by the states in India.

- **Results of test of hypothesis 3**

We are testing for the null hypothesis that there is no statistically significant difference in the annual expenditure on CSR activities amongst the 7 Union Territories in India.

Exhibit G: Tests of Normality						
FY (with reference to UTs)	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
FY 2014-15	0.438	7	0.000	0.510	7	0.000
FY 2015-16	0.489	7	0.000	0.473	7	0.000
FY 2016-17	0.475	7	0.000	0.485	7	0.000
FY 2017-18	0.484	7	0.000	0.487	7	0.000
FY 2018-19	0.494	7	0.000	0.472	7	0.000

Exhibit H: Tests of Homogeneity of Variance					
		Levene Statistic	**df1**	**df2**	**Sig.**
CSR_Exp_UTs	Based on Mean	0.544	4	30	0.704
	Based on Median	0.098	4	30	0.982
	Based on Median and with adjusted df	0.098	4	24.589	0.982
	Based on trimmed mean	0.347	4	30	0.844

Since the p-values in Shapiro-Wilk as well as Kolmogorov-Smirnov tests of normality do not exceed 0.05, we reject the null hypothesis for the test of normality and thereby conclude that the data is not normally distributed. The results of the Levene's test of homogeneity of variance reveals that the variances of each group are almost the same, thereby indicating that our assumption of homogeneity of variances has been met. Accordingly, we have applied a non-parametric test (Kruskal-Wallis test) to test our hypothesis.

Exhibit I: Kruskal-Wallis Test			
Ranks			
	Financial Year	N	Mean Rank
CSR_Exp_UT	FY 2014-15	7	14.07
	FY 2015-16	7	16.43
	FY 2016-17	7	18.64
	FY 2017-18	7	21.43
	FY 2018-19	7	19.43
	Total	35	
Test Statistics[a,b]			
		CSR_Exp_UTs	
Kruskal-Wallis H		2.141	
df		4	
Asymp. Sig.		0.710	

a. Kruskal Wallis Test
b. Grouping Variable: FY

We observe that the mean ranks of the annual expenditure on CSR activities by union territories in India was the highest in "FY 2017-18" and lowest in the "FY 2014-15". The data does not provide us with evidence to reject the null hypothesis (p-value 0.710 > 0.05) and we conclude that there is no statistically significant difference in the year-on-year annual expenditure on CSR activities by the union territories in India.

- **Results of test of hypothesis 4**

We are testing for the null hypothesis that there is no statistically significant difference in the annual expenditure on CSR activities across regions in India.

Exhibit J: Tests of Normality						
FY (with reference to regions)	**Kolmogorov-Smirnov**			**Shapiro-Wilk**		
	Statistic	**df**	**Sig.**	**Statistic**	**df**	**Sig.**
FY 2014-15	0.209	6	0.200	0.921	6	0.514
FY 2015-16	0.175	6	0.200	0.966	6	0.864
FY 2016-17	0.234	6	0.200	0.897	6	0.356
FY 2017-18	0.214	6	0.200	0.931	6	0.588
FY 2018-19	0.207	6	0.200	0.915	6	0.470

Exhibit K: Tests of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
CSR_Exp_Regions	Based on Mean	1.092	4	25	0.382
	Based on Median	0.582	4	25	0.678
	Based on Median and with adjusted df	0.582	4	21.174	0.679
	Based on trimmed mean	1.025	4	25	0.414

Since the p-values in Shapiro-Wilk as well as Kolmogorov-Smirnov tests of normality exceed 0.05, we do not reject the null hypothesis for the test of normality and thereby conclude that the data is normally distributed. The results of the Levene's test of homogeneity of variance reveals that the variances of each group are almost the same, thereby indicating that our assumption of homogeneity of variances has been met. Accordingly, we have applied a parametric test (One-Way ANOVA) to test our hypothesis.

The results of the One-Way ANOVA test have been tabulated below:

Exhibit L: ANOVA

CSR_Exp_Regional

	Sum of squares	df	Mean square	F	Sig.
Between groups	3652582.452	4	913145.613	0.683	0.611
Within groups	33439227.16	25	1337569.086		
Total	37091809.61	29			

10% of the total variation in the annual expenditure can be explained as a function of the regions to which the states and union territories belong. The data does not provide us with evidence to reject the null hypothesis (p-value 0.611 > 0.05) and we conclude that there is no statistically significant difference in the regional annual expenditure on CSR activities.

- **Results of test of hypothesis 5**

We are testing for the null hypothesis that there is no statistically significant difference in the CSR expenditure of the 6 regions in India.

Exhibit M: Tests of Normality

Regions	Kolmogorov-Smirnov			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Central	0.191	5	0.200	0.951	5	0.743
East	0.236	5	0.200	0.901	5	0.417
North	0.203	5	0.200	0.971	5	0.884
North East	0.233	5	0.200	0.926	5	0.566
South	0.182	5	0.200	0.971	5	0.884
West	0.264	5	0.200	0.937	5	0.644

Exhibit N: Tests of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
CSR_RegionalExp	Based on Mean	3.509	5	24	0.016
	Based on Median	1.748	5	24	0.162
	Based on Median and with adjusted df	1.748	5	9.521	0.215
	Based on trimmed mean	3.473	5	24	0.017

Since the p-values in Shapiro-Wilk as well as Kolmogorov-Smirnov tests of normality exceed 0.05, we do not reject the null hypothesis for the test of normality and thereby conclude that the data is normally distributed. The results of the Levene's test of homogeneity of variance based on mean reveals that the variances of each group are significantly different, thereby indicating that our assumption of homogeneity of variances has not been met. Accordingly, we have applied a non-parametric test (Kruskal-Wallis test) to test our hypothesis.

Exhibit O: Kruskal-Wallis Test			
Ranks			
	Regions	N	Mean Rank
CSR_Exp_Regional	Central	5	10.20
	East	5	11.80
	North	5	17.60
	North East	5	3.00
	South	5	24.20
	West	5	26.20
	Total	30	
Test Statistics[a,b]			
		CSR_Exp	
Kruskal-Wallis H		25.330	
df		5	
Asymp. Sig.		0.000	

a. Kruskal Wallis Test
b. Grouping Variable: Region

We observe that the mean ranks of CSR expenditure in "South" and "West" regions are higher as compared to other regions, thereby indicating that the overall expenditure made by both these regions on CSR activities in the past 5 years has been higher as compared to other regions. The data provides us with evidence to reject the null hypothesis (p-value 0.000 < 0.05) and hence, we conclude that there is a significant difference in terms of the expenditure on CSR activities across the 6 regions in India.

Further, a post-hoc analysis has been performed to identify the sources of the differences.

Exhibit P: Results of the Post-Hoc Analysis (Mann-Whitney U-test)

Region	Central	East	North	North East	South	West
Central	-	0.465*	0.028	0.009	0.009	0.009
East	0.465*	-	0.047	0.009	0.009	0.009
North	0.028	0.047	-	0.009	0.028	0.016
North East	0.009	0.009	0.009	-	0.009	0.009
South	0.009	0.009	0.028	0.009	-	0.347*
West	0.009	0.009	0.016	0.009	0.347*	-

*In these cases, we do not reject null hypothesis. There is no significant difference in the expenditure made by the two regions under consideration.

In all other cases, we reject the null hypothesis and conclude that there is a significant difference in the expenditure made by the two regions under consideration.

Exhibit Q: Summary of results of post-hoc analysis

Regional Pair	**Regions under consideration**	**Observations**
1	Central and East	*No significant difference in the expenditure on CSR activities
2	Central and North	Significant difference in the expenditure on CSR activities
3	Central and North East	Significant difference in the expenditure on CSR activities
4	Central and South	Significant difference in the expenditure on CSR activities
5	Central and West	Significant difference in the expenditure on CSR activities
6	East and North	Significant difference in the expenditure on CSR activities
7	East and North East	Significant difference in the expenditure on CSR activities
8	East and South	Significant difference in the expenditure on CSR activities
9	East and West	Significant difference in the expenditure on CSR activities
10	North and North East	Significant difference in the expenditure on CSR activities
11	North and South	Significant difference in the expenditure on CSR activities
12	North and West	Significant difference in the expenditure on CSR activities
13	North East and South	Significant difference in the expenditure on CSR activities
14	North East and West	Significant difference in the expenditure on CSR activities
15	South and West	*No significant difference in the expenditure on CSR activities

There are no statistically significant differences in the Central-East and South-West. However, statistically significant differences were observed amongst remaining 13 regional pairs.

- **Interpretation of Results**

A perusal of the results of the analysis reveals several pertinent points about the pattern of annual CSR expenditure. The spending on CSR activities was the lowest in the maiden year of the implementation of the legal mandate, i.e., in FY 2014-15. Since it was the inception year, perhaps companies were not willing to part with their earnings or it might be due to lack of awareness. But it is evident from the data that the annual CSR expenditure in the later years increased, indicating that the legal mandate was showing results. The annual expenditure on CSR gradually increased, reaching a record high in FY 2018-19 overall and in the states, and in FY 2017-18 in the union territories, thereby indicating increased focus on the need and importance of CSR by companies. Apparently, the legal mandate is working well and the companies have been spending consistently on CSR activities year after year.We also observe that CSR expenditure has been more or less the same statistically, year on year, whether studied state-wise, UT-wise or at the national level. This indicates that the companies, guided by the legal provision, have given preference to the local areas in terms of the recipients of the CSR funding.

In objectives 1 to 4, we studied the pattern of CSR expenditure on year-to-year basis and no statistically significant differences were observed in either of the associated hypotheses. But upon studying objective 5, which is the region-wise pattern of CSR expenditure, some interesting and different results were found. The results indicate that out of the possible 15 regional pairs, only 2 pairs, namely Central-East and South-West, did not show statistically significant differences in terms of CSR expenditure (Exhibit P). In the remaining regional pairs, statistically significant differences are evident, thereby indicating unbalanced regional development in the country. The underlying reason could be Section 135 of the Act, which clearly mentions that preference for CSR spending may be given to local area(s) where the company operates. Looking at the mean ranks of these 4 regions (Exhibit O), it is observed that the Central and Eastern regions spent nearly 50% less of the amount of CSR funds spent by the Southern and Western regions (The mean ranks of the Central, Eastern, Southern and Western regions are 10.20, 11.80, 24.20 and 26.20 respectively.) We further note that the North-Eastern region spent the lowest amount on CSR activities, while the Western region spent the highest amount on CSR activities (The mean ranks of the North-Eastern and Western regions are 3.00 and 26.20 respectively). This is further substantiated by the fact that the state of Maharashtra alone has consistently expended the highest amount on CSR activities in all of the five financial years under study (refer to the raw data presented under heading 6 of this paper titled ‘Selection of statistical data’). The remaining 13 regional pairs are unequal in terms of their size as well as in terms of the level of economic development, and therefore, the statistically significant differences in CSR expenditure for each of the 13 remaining regional pairs reflects this inequality.

Conclusion and Recommendations

The results of the econometric techniques performed reveal that the year-on-year amount of expenditure on CSR activities in India has been more or less the same across states, union territories, regions. That is to say, each state, union territory and region has spent an equitable amount of funds on CSR activities annually, and therefore, the amount of CSR expenditure is not a function of the financial years under consideration.

Our analysis also reveals that the amount of CSR expenditure was the lowest in FY 2014-15, i.e., during the initial year of implementation of the legal mandate.

However, upon analysing the amount of overall CSR spending made by the regions in India across all the years under study, our findings reveal a statistically significant difference in the amount of CSR expenditure across regions. In other words, our findings indicate a strong likelihood that the amount of CSR expenditure is a function of the region undertaking the expenditure. While the Central-East and South-West regional pairs do not exhibit any statistically significant difference in the amount of CSR expenditure, the remaining 13 regional pairs reveal a statistically significant difference in the amount of CSR expenditure.

The high proportion of CSR spending in Southern and Western regions is due to the fact that both these regions comprise of states that are ranked high in terms of economic and industrial development. Specifically, the states of Maharashtra and Gujarat in the western region and the states of Tamil Nadu and Andhra Pradesh in the southern region are coastal states, have well-established industries and contribute significantly to the economy.[16] The legal provision permitting companies to give preference to local areas when deciding upon the recipients of the CSR funds has further strengthened corporate stronghold in these states. At the same time, even though the state of Uttar Pradesh in the Central region is the largest state in the country and is a significant contributor to the GDP, CSR expenditure in this state is low. This might be due to the fact that some of the companies may not be spending the requisite amount on CSR activities, and therefore, has a scope for further study. We conclude that there is a disproportionate CSR spending in certain regions of the country and perhaps, it is now time for the government to review its policy mandating expenditure in regions that rank lowest in term of CSR spending.

Therefore, on the basis of our findings, we suggest the following measures to be adopted by the government:

- The government may consider stipulating a minimum percentage of the mandated 2% spending to be made in regions that rank lowest in terms of amount of CSR funding received. This measure shall complement other policy measures undertaken by the government to achieve balanced regional development.
- The government may also consider linking tax holidays and other tax-related incentives with CSR. Instead of insisting on direct involvement, established companies may be encouraged to open up new companies, either in branch or subsidiary form, in regions such as the North-East, wherein CSR spending is low and industrial growth has historically been low owing to local conditions. The government should allow direct capital investment by setting up of new industries in low developed areas to a prescribed number of times, say 50 times of the mandatory CSR spending and hence, exempt CSR spending in that case. For example, suppose the average net profit of the previous three years of a company is Rs. 100 Crores, and therefore, the mandated CSR spending is Rs. 2 crores. If the company undertakes direct capital investment or sets up a new industry in the specified, low developed areas to the extent of Rs. 100 crores (50 times of its mandated CSR spending), then the parent company shall be exempted from CSR spending for upto a specified number of years, say, 3 years. Here, it is implied that such a company would be in a position to raise funds through debt against its equity.
- The government may consider conferring a special status (like the Maharatna, Navratna and Miniratna status accorded to public-sector undertakings) to corporations that invest significantly more than the mandated 2% spending. This form of recognition shall not only improve the public image of the companies, but also encourage them to maintain the status-quo in the years to come, which would eventually translate into a win-win situation not only for the corporates but also for the society within which it operates.

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