Is ‘Societal Expenditure’ an Alternative Route to Business Success? An Empirical Study

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Abstract—Expenditure on societal purpose is two pronged in nature. Firm can do expenses either under compulsion of legal provision or for the purpose of philanthropy. Alternatively, review of literature and present business practices highlight the immense scopes of societal expenditure when it is coupled with business strategies. In this backdrop, six firms have been chosen randomly from a list of hundred firms who have spent on CSR. In line with the developed research query expenditure data on purely business and ‘business intention coupled with societal purpose’ for last 12 years have been collected. Based on regression model, comparative profit impacts of ‘purely business expenditure’ and ‘business intention coupled with societal purpose’ have been analyzed. During model development, problem of ‘serial correlation’ and ‘multicollinearity’ have been removed. In conclusion, it is observed that societal expenditure coupled with business intention could have alternative route to business.

Index Terms—corporate social responsibility, societal expenditure, business expenditure, profitability, contribution ratio, principal component analysis

I. INTRODUCTION

Ref. [1] defines Corporate Social Responsibility (CSR) as the continuing commitment towards the society by the business perspective for recuperating the eminence of life of the workforce and society as a whole. Ref. [2] said CSR indulges a business to be conducted at shareholder’s desire whose aim is to make profit by maintaining the ethical standard and by following the basic conventional rules of the society. Ref. [3] also suggests that a company should take into account four components such as economical, legal, ethical and philanthropic responsibility to gain profit by behaving responsible towards society. Ref. [4] stated corporate social responsibility helps to gain many activities like to reduce risk, attract and retain customers and feel them proud that they are working in an organization that are ethical and behaving in an responsible manner towards the society. Thus in this present era the adoption of CSR activities may be due to two reasons as (i) due to Compulsion & (ii) as a Societal Approach. Ref. [5] said “Every company harms the environment”. Thus corporate social responsibility is about two aspects like reducing negative effects and increasing positive contributions [6]. So in Dec 2007, Reserve Bank of India circulated a notice amongst banks to emphasize more on CSR activities to enhance business performance [7], and in case of Holistic Approach-Ref. [4] argues that “social responsibility will give attention to improving the quality of the company(profit), community(people), environment (planet). Corporate Social Responsibility do act ethically in the interest of shareholders at one end and also enhance the performance of the business on the other end for the other end. So, We can say that it will be good for a company to consider its CSR activities not only as just a societal expenditure that it has to make to behave responsibly towards society but also to accomplish competitive advantage for its business to gain sustainable development for its business. This suggests me to do the literature review to study all the said issues in detail.

II. LITERATURE REVIEW

There are four categories of my literature survey seeking to discuss the corporate Social responsibility as (i) Types of CSR[8][9] (ii) Impact of CSR on Society[10][11] (iii) Impact of CSR on company performance[12]-[17] (iv) Comparative discussion with pure business expenditure and with pure societal expenditure. Ref. [8] identified the institutional players like Government, Competitors, media, consumer, labor unions, institutional investors, Industrial associations play a key role in determining the CSR activities and monitoring the social responsiveness of the company. Ref. [9] considered the list of CSR activities taken by different organizations such as children & community welfare, education and rural development, empowering women by giving vocational training, healthcare, employment, protection to environment, etc. Ref. [10] suggested CSR is related to enhance the quality of life of the shareholders by treating them in an ethical manner and simultaneously gaining profitability for the organization. A corporation is said to be successful and socially responsible when it is able to run a profitable business by considering its favorable and unfavorable effect of its operation Ref. [11]. Number of studies has been taken place where the relationship between Corporate Social responsibility and various aspects of organizational performances has been shown. There are various views to discuss the relationship between CSR and business performance. Firstly, there is negative relationship between CSR and profitability, stock returns Ref. [12], earning per share [13] as CSR...
activities involve high cost and this reduce profit. Secondly, there is positive relationship between CSR and financial performance [14], firm reputation [15] and profitability [16]. Ref. [17] concluded that there is a significant effect of CSR on business performance. And, according to the third view there is no relationship between the CSR and corporate performance [18] as there are more factors which are needed to take into account to establish the relationship between them. Our Literature survey shows that CSR can serve as a highly effective component of business performance [19]. All of these research literatures conceptualize and test the relationship between the CSR and corporate performance [18] as there is a significant effect of CSR on business performance. And, according to the third view there is no relationship between CSR and corporate performance [18]. Ref. [17] concluded that there is a positive relationship between CSR and business performance like profit of the said firms. Variables which signify Societal Expenditure are miscellaneous expenditure & compensation to employees as these two variables describe the expenditures made towards the society. Like miscellaneous expenditure is composed of donation, social and community expenditure, environment & pollution control related expenses, etc., and compensation to employees considers expenses like staff welfare & training expenditure, other expenses related to employees, etc. Also the variables that signify marketing expenditure are advertisement expenditure, selling & distribution expenditure as these two variables describe the expenditures made to gain marketing outcomes through promotional activities. Again to measure the business performance ‘Profit after Tax’ i.e. PAT has been used. We have collected secondary data of the required variables for the said firms from PROWES database [22] for the period march-2000 to march-2012. With these data, we have tried to study the contribution of these expenditures when considered as independent variables on Profitability which is measured as a dependent variable through the method of regression for these 6 different firms jointly. Thus we carry out Regression for analyzing the variation in dependent variable as a result of variation in independent variable for these chosen firms. Firstly, we have conducted Regression analysis to analyze the relationships between the dependent variable i.e. PAT and independent variables such as Ad Exp, S&D Exp, Misc. Exp, and Compensation to Employee using complete data set of all stated companies for the period of march-2000 to march-2012. The value of (co-efficient of determination) R² which is considered for goodness of fit is found to be .577 which indicates that 42.3% error, a large enough. Since 42.3% remain unexplained, hence the model doesn’t fit the data well. The significant value of F is 0.000 which means that the dependent variable can be explained well by the independent variables. The values of t-statistics for the coefficients of independent variables are also below -2 and above +2, which determine all these variables are having significant impact on profitability. As the data are time series in nature hence there is a chance of serial correlation. For this reason we have examined the Durbin-Watson value [23] and which is 0.643. This is closer to 0 and it reflects the presence of positive serial correlation among the residuals. We have also examined VIF-value and Tolerance-value in our study which too is not desirable enough to take into account. As we know, with the help of “Tolerance-value” it is helpful to decide how much independent variables are associated with each other i.e. the “problem of multicollinearity” [24]. As the Tolerance values are 0.352, 0.423, 0.357, 0.314, it specifies that the selected variable

### III. RESEARCH QUERY

Based on this we have formulated research question which is described as follows:

- To compare between contribution of societal expenditure (SE) such as donation, social and community expenditure, environment & pollution control related expenses, staff welfare & training expenditure, other expenses to employees, etc and marketing expenditure (ME) such as Advertisement Expenditure and Selling & Distribution expenditures on profit. By this comparison we can understand the comparative effect of expenditure made on societal purpose coupled with business intention with the expenses employed for business purpose in terms of their profit contribution to the business. In fact above stated research question can be translated into (two queries i) whether SE and ME significantly creating its impact on profit or not, ii) Ratio of ‘contribution coefficient of SE’ and ‘contribution coefficient of ME’ is less than one or not. Further these queries can be checked for all six companies chosen at random.

### IV. PROCESS OF SOLVING RESEARCH QUERY

To test the mentioned research query, a list of 100 companies on the basis of their “Net Sales for the Financial Year 2012 and their spending on CSR” [21] has been taken into account for choosing 6 companies randomly by lottery method. The 6 companies are Axis Bank, Coal India Limited (CIL), National Thermal Power Corporation (NTPC), ITC Ltd., State Bank of India (SBI), ICICI Bank. The firms taken into account at various view point are as follows:

- **Banking Sector**
  - a) Axis Bank  
  - b) S.B.I  
  - c) ICICI Bank

- **Giant Corporate Sector**
  - a) C.I.L  
  - b) NTPC  
  - c) ITC Ltd.

- **Private Sector**
  - a) Axis Bank  
  - b) ICICI Bank  
  - c) ITC Ltd.

- **Public Sector**
  - a) C.I.L  
  - b) NTPC  
  - c) ITC Ltd.

To study the research query it is needed to collect data societal expenditures, marketing expenditure and business performance like profit of the said firms. Variables which signify Societal Expenditure are miscellaneous expenditure & compensation to employees as these two variables describe the expenditures made towards the society. Like miscellaneous expenditure is composed of donation, social and community expenditure, environment & pollution control related expenses, etc., and compensation to employees considers expenses like staff welfare & training expenditure, other expenses related to employees, etc. Also the variables that signify marketing expenditure are advertisement expenditure, selling & distribution expenditure as these two variables describe the expenditures made to gain marketing outcomes through promotional activities. Again to measure the business performance ‘Profit after Tax’ i.e. PAT has been used. We have collected secondary data of the required variables for the said firms from PROWES database [22] for the period march-2000 to march-2012. With these data, we have tried to study the contribution of these expenditures when considered as independent variables on Profitability which is measured as a dependent variable through the method of regression for these 6 different firms jointly. Thus we carry out Regression for analyzing the variation in dependent variable as a result of variation in independent variable for these chosen firms. Firstly, we have conducted Regression analysis to analyze the relationships between the dependent variable i.e. PAT and independent variables such as Ad Exp, S&D Exp, Misc. Exp, and Compensation to Employee using complete data set of all stated companies for the period of march-2000 to march-2012. The value of (co-efficient of determination) R² which is considered for goodness of fit is found to be .577 which indicates that 42.3% error, a large enough. Since 42.3% remain unexplained, hence the model doesn’t fit the data well. The significant value of F is 0.000 which means that the dependent variable can be explained well by the independent variables. The values of t-statistics for the coefficients of independent variables are also below -2 and above +2, which determine all these variables are having significant impact on profitability. As the data are time series in nature hence there is a chance of serial correlation. For this reason we have examined the Durbin-Watson value [23] and which is 0.643. This is closer to 0 and it reflects the presence of positive serial correlation among the residuals. We have also examined VIF-value and Tolerance-value in our study which too is not desirable enough to take into account. As we know, with the help of “Tolerance-value” it is helpful to decide how much independent variables are associated with each other i.e. the “problem of multicollinearity” [24]. As the Tolerance values are 0.352, 0.423, 0.357, 0.314, it specifies that the selected variable
contributes little information to the model. Also the values of VIF are 2.839, 2.366, 2.803, and 3.187 that shows the degree of Multicollinearity. As a result, by observing all these values we can conclude that there is significant impact of these chosen independent variables on dependent variable, but the model is not free from the consequences of Multicollinearity and Serial Correlation. Also we have checked whether the presence of multiple correlations found in the model or not by seeing the inter correlation of the independent variables. We can see in Table: A, where high inter-correlation found among the independent variables and this reaffirm us the occurrence of multicollinearity in the model (Table. I). So we proceed with the objective of eliminating these problems. To deal with the problem of multicollinearity it is needed to carry out the “Principal Component Analysis” [25] which recognizes two factors, namely (a) Factor 1- Societal Expenditure & (b) Factor 2-Marketing Expenditure. Factor 1 includes Miscellaneous Expenditure and Compensation to Employees and Factor 2 includes Advertisement Expenditure and Selling & Distribution expenditures with the help of ‘Rotated Component Matrix’ (Table. II). Approx 88% amount of variances in the observed variables accounted by these factors. Again to avoid the problem of Serial Correlation, we have considered the lag of one period of the dependent variable (PAT), that can be symbolized as Lag(1)PAT and tried to analyze the impact of these independent variables on the Lag(1) PAT through the technique of ‘regression analysis’ for these 6 companies separately.

A. Experimentation-1(AXIS Bank): From Table III, We Can Find as Follows

a) The value of (co-efficient of determination) $R^2$ is 0.988 which is in the range of 0 to 1 that reflects the model is well fitted with the given data.

b) The Durbin-Watson value is 1.768 that means now there is no serial correlation with the lagged variable of PAT and the results with the regression analysis can well be accepted.

c) The VIF value for both the expenditures are also much better, we can see the values are 1.739 & 1.739 i.e. the association among the independent variables is weaker now.

d) The significant value of F-statistic is 0.000 which infers that the dependent variables are well explained with the independent variables.

![Table I. Correlation Matrix](image)

![Table II. Rotated Component Matrix](image)

Now, if we observe the values of standardized co-efficient $\beta$ are 1.017 and -.028(Table IV) for Societal Expenditure & Marketing Expenditure, respectively, which represents that the societal expenditure is doing well to influence the profit of the said organization than that of the marketing expenditure. Also the values of t-statistic are 50.25 & -1.39(Table IV) for Societal Expenditure & Marketing Expenditure, respectively. The value for the Societal Expenditure is much desirable that shows the relative importance of Societal Expenditure in explaining the dependent variable and the value is significant also, but the value for marketing expenditure is not significant. So we can say Societal Expenditure has significant impact on profit.

B. Experimentation-2(CIL): From Table III, We Can Find as Follows

a) The value of (co-efficient of determination) $R^2$ is 0.809 which is in the range of 0 to 1 that reflects the model fits the data well.

b) The Durbin-Watson value is 1.554 that means there is now no serial correlation in the variables.
with lagged PAT and the results with the regression analysis can well be accepted.

c) The VIF value for both the expenditures are also much better, we can see the values are 1.493 & 1.493 i.e. the associationhip among the independent variables is weaker now.

d) The significant value of F-statistic is 0.000 which infers that the dependent variables are well explained with the independent variables.

TABLE III. REQUIRED STATISTICS FOR MODEL

<table>
<thead>
<tr>
<th></th>
<th>Axis Bank</th>
<th>CIL</th>
<th>NTPC</th>
<th>ITC Ltd</th>
<th>SBI</th>
<th>ICICI</th>
</tr>
</thead>
<tbody>
<tr>
<td>R²</td>
<td>.988</td>
<td>.896</td>
<td>.932</td>
<td>.954</td>
<td>.889</td>
<td>.795</td>
</tr>
<tr>
<td>D-W</td>
<td>1.768</td>
<td>1.554</td>
<td>2.18</td>
<td>1.183</td>
<td>1.820</td>
<td>1.163</td>
</tr>
<tr>
<td>VIF</td>
<td>1.739</td>
<td>1.493</td>
<td>1.604</td>
<td>1.255</td>
<td>2.340</td>
<td>1.093</td>
</tr>
<tr>
<td>F</td>
<td>2118.45</td>
<td>38.72</td>
<td>61.82</td>
<td>92.71</td>
<td>36.10</td>
<td>17.46</td>
</tr>
<tr>
<td>Sig.</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.001</td>
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</table>

Now, if we look at the values of standardized co-efficient ‘β’ which are .585 & .480 (Table V) for Societal Expenditure & Marketing Expenditure, respectively and from these we can infer that the impact of societal expenditure on the profit of the organization is quite desirable if we compare it with the marketing expenditure. Also the values of t-statistic are 4.45 & 3.65 (Table V) for Societal Expenditure & Marketing Expenditure, respectively. The value for the Societal Expenditure is much enviable that shows the relative importance of this expenditure in explaining the dependent variable and the value are significant for both the expenditures also.

D. Experimentation-4(ITC Ltd.): From Table III, We Can Find as Follows

a) The value of (co-efficient of determination) R² is 0.954 which is in the range of 0 to 1 that reflects the model is well fitted with the given data.

b) The Durbin-Watson value is 1.82 that means there is the presence of serial correlation with the lagged variable of PAT. The result may be better if further lagged values of PAT should have been taken into account.

c) The VIF value is also not desirable one.

d) The significant value of F-statistic is 0.000 which infers that the dependent variables are well explained with the independent variables.

TABLE V. COMPARATIVE PROFIT IMPACT FOR Axis Bank

<table>
<thead>
<tr>
<th></th>
<th>B-value</th>
<th>β-value</th>
<th>t-value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Societal Expenditure</td>
<td>35027.675</td>
<td>1.017</td>
<td>50.25</td>
<td>.000</td>
</tr>
<tr>
<td>Marketing Expenditure</td>
<td>-4793.54</td>
<td>-.028</td>
<td>-1.39</td>
<td>0.0197</td>
</tr>
</tbody>
</table>

Now, if we look at the values of standardized co-efficient ‘β’ which are .270 & .714(Table VII) for Societal Expenditure & Marketing Expenditure, respectively, which represents the marketing expenditure is doing well in influencing the profit. Here is the case of exception, as we can see the prime products of ITC are not socially acceptable one, so the responsible behaviour towards the society by it also not worth in that way. The values of t-statistic are 1.06 & 2.81(Table VII) for Societal Expenditure & Marketing Expenditure, respectively. The value for the Societal Expenditure is not that desirable which shows the relative importance of Societal Expenditure in explaining the dependent variable is not significant.

E. Experimentation-5(SBI): Again from Table III, We Can Find as Follows

a) The value of (co-efficient of determination) R² is 0.889 which is in the range of 0 to 1 that reflects the model is well fitted with the given data.
b) The Durbin-Watson value is 1.82 that means there is no serial correlation among the residuals and the results with the regression analysis can well be accepted.

c) The VIF values for both the expenditures are 2.34 & 2.34 i.e. the relationship among the independent variables is not strong now.

d) The significant value of F-statistic is 0.000 which infers that the dependent variables are well explained with the independent variables

Now, from Table VIII if we look at the values of standardized co-efficient ‘β’ which is 546 & 460 for Societal Expenditure & Marketing Expenditure, respectively, which represents that the societal expenditure is doing well to influence the profit of the organization than that of the marketing expenditure. Also the values of t-statistic are 3.21 & 2.70 (Table VIII) for Societal Expenditure & Marketing Expenditure, respectively. The value for the Societal Expenditure is much desirable that shows the relative importance of Societal Expenditure in explaining the dependent variable and the value is significant also. So we can say Societal Expenditure has significant impact on profit. So we can say in the company like SBI also Societal Expenditure has significant impact on profit though it is a one of the premier PSUs in banking sector.

F. Experimentation-6 (ICICI BANK): From Table III, We Can Find as Follows

a) The value of (co-efficient of determination) $R^2$ is 0.795 which is in the range of 0 to 1 that reflects the model is well fitted with the given data.

b) The Durbin-Watson value is 1.163 that means the data is not free from the presence of serial correlation. The result may be better if further lagged values of PAT should have been taken into account.

c) The VIF value for both the expenditures are also much better, we can see the values are 1.093 & 1.093 i.e. the associationship among the independent variables is weaker now.

d) The significant value of F-statistic is 0.000 which infers that the dependent variables are well explained with the independent variables

Now, if we look at the values of standardized co-efficient ‘β’ are .808 & .209(Table IX) Societal Expenditure & Marketing Expenditure, respectively, which shows that the societal expenditure has much impact on the profit of the organization than that of the marketing expenditure. Also the values of t-statistic are 5.12 & 1.32 (Table IX) for Societal Expenditure & Marketing Expenditure, respectively. The value for the Societal Expenditure is much desirable that shows the relative importance of Societal Expenditure in explaining the dependent variable and the values are significant also but the value is not significant for marketing expenditure. So we can say Societal Expenditure plays a significant role in contributing to profit.

V. ANALYSIS

For the purpose of analysis we propose a ratio between standardized ‘contribution co-efficient of societal expenditure to profit’ and ‘standardized contribution co-efficient of marketing expenditure to profit’ ignoring their direction of impact and we have named it as “Contribution Ratio” (CR). Thus Contribution Ratio (CR) can be obtained by dividing mode value of $\beta_{S.E}$ with mode value of $\beta_{M.E}$, it is an attempt to make the regression coefficients (i.e. β) more comparable. If the value of CR>1, it implies societal spending coupled with business intention is more profit contributory than that of purely business expenditure. Similarly, if the value of CR<1, it implies societal spending coupled with business intention is less visible in contributing profit as compared purely business expenditure. In the same line if the value of CR=1, it implies societal spending coupled with business intention is equally helpful in contributing profit as purely business expenditure does. For the present work the Calculated values of CR of Axis Bank, CIL, NTPC, ITC Ltd., SBI & ICICI are found to be 36.32, 1.21, 0.476, 0.378, 1.186 and 3.86, respectively (Table X). We can see in most of the selected firms the profit impact effect of societal spending is much higher than that of marketing expenditure except in cases of NTPC & in ITC Ltd since the CR values are less than 1 for these duos. As per the results of CR for each and every selected firm Axis bank tops the list followed by ICICI, SBI, and CIL etc. Again in Table X, we have the ranks of the chosen firms according to ‘actual spending in CSR activities’ as mentioned by Ref [21]. According to this the rank of ‘actual spending in CSR’ Axis bank is 5 which is almost towards the last and the other banks which are above it are ICICI-rank is 4, NTPC-rank is 3, etc i.e. all are above Axis bank (the data of actual spending in CSR activities for ITC Ltd. For year 2012 is not provided [21] but the contribution of societal expenditure to profit (i.e. CR value=36.32)) for Axis bank is much higher than ICICI, NTPC and even more than that of the other firms. Again, ICICI is at 4th position but the contribution of societal expenditure to profit (i.e. CR value=3.86) is second highest. Hence, the spearman’s rank correlation between the ranking based on ‘CR’ and ranking based on the ‘actual spending in CSR activities’ is - .600 (probability value is insignificant). Thus we can say only making high societal expenditures may not guarantee to profit impact, decisions should be taken that where to invest and how to invest so that with the corporate image, it can also be able to generate high of the same.

<table>
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<tr>
<th>TABLE VII. COMPARATIVE PROFIT IMPACT FOR ITC LTD</th>
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<tbody>
<tr>
<td><strong>B-value</strong></td>
</tr>
<tr>
<td>Societal Expenditure</td>
</tr>
<tr>
<td>Marketing Expenditure</td>
</tr>
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</table>
VI. CONCLUSION

We have observed that expenditure on CSR is not a guarantee of profit impact of the same. A firm needs to be strategic vis-a-vis incurring expenditure on the same. Most of the marketers follow the model of doing promotional expenditure to attract the customer by establishing right brand positioning. Now-a-days expenditure on advertisement is in fact unproductive since believability [26] [27] on the same is not free from question. Moreover excess use of other promotional mix makes the weapon blunt and less useful [28]. Ref. [29] reflected the traditional use of marketing Mix which is a matter of concern in this present era. Thus it is imperative to identify alternative routes to create customer faith on firm and its deliverables. In this regard expenditure on welfare of the society and efficient communication to targeted members of the same would possibly restore back the lost faith on the company by its consumer. Hence this option may be a good enabler of profit through realization of the market.

Present research explores the issue, we need further research to understand and confirm the construct how different facts of societal expenditure bring good corporate image in the mind of the customer.

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