

Corporate Social Responsibility and Corporate Financial Performance: An Exploratory Study of Measurement-Approach Selection Issues

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Abstract

This article examines various approaches used in numbers of empirical studies for measuring corporate social responsibility (CSR) and corporate financial performance (CFP) to find out measurement challenges. This study also investigates alternative strategic approaches for measuring CSR and CFP. In this study, various empirical research articles intensively reviewed to investigate which measurement approach is appropriate to incorporate in future research. It was found that CSR is being strategically utilized in many ways such as uni-dimensional to multi-dimensional in the empirical literature. Besides, multi-dimensional CSR measurement approaches employed in different forms like reputation indices, questionnaire-based survey, content analysis etc. and uni-dimensional

approach has been used in various studies. While accounting-based variables, market-based variables and both type variables have been utilised for measuring firm financial performance. The findings also show that no CSR measurement approach is without limitations. In addition, most of the approaches face two problems namely researcher's subjectivity and biasness selection of it which may affect the nature of CSR and CFP relationship results. This study suggests that potential measures should be taken to overcome these limitations.

Keywords: *Corporate Social Responsibility, Corporate Financial Performance, Reputation Index, Content Analysis, Measurement Approaches.*

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Introduction

Corporate social responsibility (CSR) and corporate financial performance (CFP) measurement issues have been discussing across the world over the period of time by academicians and business managers due to equivocal nature of empirical results. The prior studies found the positive, negative, neutral or even curvilinear (e.g. U-shaped/inverted U-shaped) relationship between CSR and CFP. Orlitzky, et.al. (2003) and Margolis, et.al. (2007) conducted studies separately based on meta-analysis. The authors found that positive relationship is more common among the findings of the empirical literature. Remaining studies reveal negative and mixed results. Now a rationale question arises here, based on these equivocal results, how the notion of CSR and CFP are operationalised and estimated. The basic answer to this question is an inappropriate

incorporation of measurement approach in their estimation.

Generally, CFP is more importantly measured in terms of profitability ratios retrieved from financial statements of the firm which are easily accessible and relatively standardised. But the measurement of CSR notion is more difficult due to several reasons. One of the reason is disagreement on the conceptualisation of the CSR definition (Dahlsrud, 2008), while another is multiple approaches to its measurement. This is because of information related to the concept are non-financial in nature. Basically, these are very limited to retrieve and their standardisation is problematic if they are reported (Tschopp and Nastanski, 2014). The next difficulty is its disclosure because in many countries CSR reporting is not mandatory but is voluntary in nature. India is an exception in this regard because now CSR spending up to specific limit and to publish a separate CSR performance report has become mandatory with the inception of the Company Act 2013.

The main objective of this article is to review various approaches used for measuring CSR and CFP constructs deployed in empirical research studies to find out measurement

challenges. In order to investigate the alternative appropriate approach for measurement of CSR notion and CFP. One of the most significant contributions of this article is the extant empirical literature deploys a systematic study of merits and demerits of alternative approaches. Besides, another important contribution is to provide a proper guideline for measuring CSR in future and suggestions to cope with the shortcomings. Mainly two drawbacks identified which are intrinsic in most of the measurement approaches. These are researcher subjectivity and biases in selection. The structure of this paper is as follows: along with the introduction, the article starts by discussing the concept of CSR in section 2. In section 3, the empirical findings discussed related to the relationship between CSR and CFP followed by a critical review of different approaches used to measure CSR and CFP in section 4. Finally, discussion and concluding remarks discussed in section 5.

2. Concept and Definition of Corporate Social Responsibility (CSR)

Since the inception of CSR notion, there is not any consensus related to its definition, constructs, principles and even on constituent dimensions (Crane, et.al., 2008). Dahlsrud

(2008) reviewed the comprehensive literature and recognized 37 different definitions of CSR. He found great variations in CSR definitions. For example, Friedman (1970) articulated that ‘the only social responsibility of a company is to increase its profits within the rules of the game’. In contrast, Davis (1973) argued that CSR requires ‘consideration of issues beyond the narrow economic, legal and technical requirements of the company’ (Galant and Cadez, 2017). These two definitions have contrary views, one definition argues that the corporation is solely responsible to enhance the wealth of its shareholders. While other argues that corporation should take into consideration the interests of other stakeholder groups rather than its shareholders.

Stakeholders include ‘individuals or groups who benefited from or harmed by corporate actions’ (Mele, 2008). Therefore, these wide range definitions and perceptions of CSR are undoubtedly varied among managers, firms and even ordinary people (Lau, et.al., 2007). But some definitions depict consensus over the concern such as managers should look after the welfare of multiple stakeholder groups rather than focusing only on the short-term

myopic goal of shareholders' wealth maximisation (Becchetti and Trovato, 2011). While another key area of CSR study includes social, economic and environmental pillars (Galant and Cadez, 2017). Companies are engaged in various CSR activities such as pure philanthropy and to the compliance with institutional pressure from the external environment. In return, these companies earn financial growth and enhance reputation (Lee and Shin, 2010).

According to Barnett and Salomon (2006), firms avail many benefits on being socially responsible such as to mobilise resources easily, to obtain skilled and quality employees, to enhance marketability for their products and services, to create unforeseen opportunities, to avail opportunities of competitive advantages. Weber (2008) also recognised five most crucial benefits of CSR for companies namely positive impact on firm's image and reputation, positive impact on employees' motivation, retention and recruitment, to cash cost-saving benefits, increase revenue from higher sales and market share and reduce risk. Thus it has been evident from the above-recognised benefits that at firm

level CSR has macro-level effects. Skare and Golja, (2014) found that better contribution of socially responsible firms in an economy is playing a crucial role in higher economic growth. Firms CSR activities are also playing the significant role in determining country's economic growth and overall sustainable development.

3. Empirical Evidence on Relationship between Corporate Financial Performance (CFP) and Corporate Social Responsibility (CSR)

The key issue of debate in the field of corporate governance and management is the impact of CSR on firm's financial performance. In this regard, the traditional view holds that CSR is an extra burden on the firms for carrying out socially responsible activities which include investment for environmental protection and pollution reduction, packages for employees welfare and benefits, donations, sponsorships and scholarships to the community welfare etc. But the traditional view holds that these expenses will decrease firm's profitability and lead to 'competitive disadvantages' (Alexander and Buchholz, 1978). On the contrary stakeholder theory was propounded by Freeman

in 1984 which holds the view that any stakeholder group can potentially affect the firm's profitability and firm's future too if they are not satisfied (Clarkson, 1995). In the line with this theory, managers should take into account the interest of all individuals and groups which have a stake in or claim on the firm (Mele, 2008) rather than focusing only on the shareholder's value maximisation (Ruf, et.al., 2001). If they managed properly then the firm can survive for longer period of time. As satisfied employees will be motivated and perform effectively and efficiently, satisfied customers will be attracted more and willing to make repeated purchases of the products and services. They will recommend the products and

services to others, satisfied suppliers will provide discounts etc. (Galant and Cadez, 2017). Thus CSR will not only increase the satisfaction level of these stakeholders but also lead to improving financial performance (Aver and Cadez, 2009).

It is evident from the above discussion that theoretical rationale suggests both potentially positive and negative relationship between CSR and CFP. Besides this, some studies found neutral or even curvilinear (e.g., U-shaped) relationships. The main findings of the empirical literature are summarised in Table 1 which shows that some studies recognize a positive relationship between CSR and CFP.

Table 1 Empirical Studies Show Different Types of Relationship Between CSR And CFP

S. No.	Author(s)	Year of Study	Title of Study	Relationship between CSR and CFP
1.	S.A. Al-Tuwaijri, T.E. Christensen, and K.E. Hughes II	2004	The relations among environmental disclosure, environmental performance, and economic performance: A simultaneous equations approach	Positive Relationship
2.	R. Burnett and D. Hansen	2008	Eco-efficiency: Defining a role for environmental cost management	Positive Relationship
3.	O. Erhemjamts, Q. Li, and A. Venkateswaran	2013	Corporate social responsibility and its impact on firms' investment policy, organizational structure, and performance	Positive Relationship
4.	W. Rodgers, H. L. Choy, and A. Guiral	2013	Do investors value a firm's commitment to social activities?	Positive Relationship
5.	G. J. Alexander and R. A. Buchholz	1978	Corporate social responsibility and stock market performance	Neutral (No relationship)
6.	K. E. Aupperle, A.B. Carroll and J.D. Hatfield	1985	An empirical examination of the relationship between corporate social responsibility and profitability	Neutral (No relationship)
7.	McWilliams and D. Seigel	2000	Corporate social responsibility and financial performance: Correlation or misspecification?	Neutral (No relationship)
8.	N. Sun, A. Salama, K. Hussainey, and M. Habbash	2010	Corporate environmental disclosure, corporate governance and earning management	Neutral (No relationship)
9.	M. G. Soana	2011	The relationship between corporate social performance and corporate financial performance in the banking sector	Neutral (No relationship)
10.	P. L. Baird, P. C. Geylani, and J. A. Roberts	2012	Corporate social and financial performance re-examined: Industry effects in a linear mixed model analysis	Negative Relationship
11.	C. W. Peng and M. L. Yang	2014	The effect of corporate social performance on financial performance: The moderating effect of ownership concentration	Negative Relationship
12.	E. H. Bowman and M. Haire	1975	A strategic posture toward corporate social responsibility	Curvilinear Relationship
13.	M. L. Barnett and R. M. Salomon	2012	Does it pay to be really good? Addressing the shape of the relationship between social and financial performance	Curvilinear Relationship

Source: Result Summary based on Literature Review by Author

These studies suggest that firms on being socially responsible improve financial performance in terms of profitability. In addition, if CSR has a positive impact on CFP then socially responsible investments have also a positive effect on shareholders wealth maximisation (Moser and Martin, 2012). Therefore CSR works in favour of shareholders' wealth maximisation and increases the market value of shares of the firms. In contrast, other studies show negative relationship consistent with the view that social responsibility incurs additional costs and reduces the profitability of the firms. This finding also supports the conventional view articulated by Milton Friedman (1970). Such sort of investment behaviour is socially irresponsible because of one and only responsibility of the business manager to earn profit for its shareholders. Thus, the negative association between CSR and CFP can not be ignored from socially responsible corporate actions. Several management gurus believe that it is very important to be good corporate citizens

even when doing so is at the costs of shareholders (Moser and Martin, 2012). Mackey, et.al., (2007) strongly argued that shareholders should be ethical and may require CSR initiatives even at the cost them and deteriorate financial performance (Mackey, et. al., 2007).

This was also found during the review of empirical literature that some of the studies have neutral (no relationship) relationship between CSR and CFP. These studies suggest that on being socially responsible, firms neither improve its profitability nor deteriorate it. Therefore, the positive and negative impacts of CSR on firm's financial performance apparently cancel themselves out. Whilst, some studies were found the U-shaped (curvilinear) relationship, Barnett and Salomon, (2012) found that firms with low CSR performance have high CFP, and firms with moderate CSR performance have lower CFP, while firms with high CSR performance have highest CFP. Very interestingly a prior study conducted by Bowman and Haire (1975)

articulated an inverted U-shaped relationship between CSR and CFP. This study shows that moderate CSR is related to the Highest financial performance whilst low and high CSR performance is related to lower financial performance.

Therefore, all results taken together from the overall empirical review of the literature, it does not provide conclusive results on the nature of nexus between CSR and CFP. The remarkable explanations for such equivocal findings have been offered by several authors (Surroca, et.al., 2010). Ruf et.al., (2001) argued that the poor theoretical foundation of the CSR concept. The omission of relevant variables in model specifications (McWilliams and Seigel, 2000). The lack of clear direction of causality (Waddock and Graves, 1997). While some authors argued that these equivocal results are because of measurement issues (Davidson and Worrell, 1990; Griffin and Mahon, 1997), and sampling limitations (Van-Beurden and Gossling, 2008). Thus, empirical studies

incorporated for review in this study focused mainly on operationalisation and measurement issues related to the existence of a relationship between CSR and CFP. Therefore these are explored in the following section in more detail.

4. Review of Methods for Measuring the Corporate Social Responsibility (CSR)

The measurement of CSR notion is very difficult because of lack unanimity on the meaning of its theoretical foundation and concept (Dahlsrud, 2008). Besides, CSR is multidimensional with relatively heterogeneous dimensions (Carroll, 1979). As a result of these difficulties such as lack of unanimity on the theoretical foundation as well as conceptualisation, several approaches and methods have been used to measure CSR performance in empirical literature. These approaches according to their frequency of use are as follows (a.) reputation indices (b.) content analysis (c.) questionnaire based surveys and (d.) one-dimensional measures. In the following sub-

section, an attempt has been made to explore these measurement approaches in detail.

(a.) Reputation Indices

The most commonly used approach for measuring CSR is reputation indices. In this method, data is compiled by specialised rating agencies for measuring CSR performance. With this purpose major indices have been incorporated in several studies such as Dow Jones Sustainability Index (Skare and Golja, 2012), Fortune Magazine Reputation Index (Preston & O'Bannon, 1997), MSCI KLD 400 Social Index (Erhemjamts, et.al., 2013), and Vigeo Index (Gired-Potin, et.a., 2014). Besides these major indices, there are many national indices which have been used in different studies such as CFIE-French Corporate Information Centre for French Companies (Ducassy, 2013) and Respect Index for Polish Companies (Lech, 2013).

Reputation Indices include the multi-dimensional nature of CSR. These

dimensions have been identified and shown in Table 2 given below. In these identified dimensions, key themes are common across all indices such as employees welfare, natural environment, social welfare etc. In the words of Griffin and Mahon (1997), Fortune indices and MSCI KLD indices are revealed similar attributes. Among many used indices for measuring CSR, MSCI KLD is more reliable because of its comprehensive and prominent data on stakeholder management (Coombs and Gilley, 2005), and public data availability (Deckop et.al., 2006). While other authors claim that Fortune is the most estimable, comprehensive and comparable index (Johnson and Houston, 2000; McGuire, et.al., 1988). In addition, the Vigeo Index is also mostly used when authors study European countries (Gired-Potin, et. al., 2014; Van de Velde, et.al., 2005).

Table 2 Corporate Social Responsibility Dimensions incorporated by Major Indices

Dow Jones Sustainability Index	MSCI KLD 400 Social Index	Fortune Magazine Reputation Index	Vigeo Index
Social Dimensions	Community and Society	Social Responsibility	Community involvement
Social Reporting	Customers	Use of corporate assets	Human resources
Corporate Citizenship/philanthropy	Employees and supply chain	People Management	Corporate Governance
Human-capital Development	Governance and Ethics	Innovation	Business Behaviour
Industry-specific criteria	Environment	Quality of Management	Human Rights
Labour practice indicators		Quality of products/services	Environment
Talent attraction and retention		Long term investment value	
Economic Dimensions		Financial Soundness	
Code of conducts/compliance/anti-corruption and bribery		Global competitiveness	
Corporate governance			
Risk and Crisis management			
Industry specific criteria			
Environmental Dimensions			
Environmental Reporting			
Industry specific criteria			

Source: Compiled by Author

Dow Jones Sustainability Index is the most healthy index in terms of underlying dimensions such as risk and crisis

management and geographical area covered in the Index shown in Table 3. Artiach, et.al.(2010) also recognised Dow Jones

Sustainability Index is one of the best as it includes all industrial sectors. But it is the matter of discussion which index is the best corporate social responsibility measure. The most important benefits of indices are easily availability of data and comparability of firms in a systematic manner. The number of scholars critically analysed the various

indices and they found many shortcomings in them. As they are generally compiled by private firms and they have their own procedures and methods of the index creation. They do not apply necessarily scientific methods (Graafland, et.al., 2004; Unerman, 2000).

Table 3 Corporate Social Responsibility Indices based on Geographical Location

Index	Geographical Location (Index Coverage)
Dow Jones Sustainability Index (DJSI)	1. Dow Jones Sustainability Index (DJSI)World <ul style="list-style-type: none"> • Dow Jones Sustainability World • Dow Jones Sustainability World Enlarged • Dow Jones Sustainability Emerging Markets
	2. Dow Jones Sustainability Index (DJSI) Regions <ul style="list-style-type: none"> • Dow Jones Sustainability Asia/Pacific • Dow Jones Sustainability Europe • Dow Jones Sustainability North America
	3. Dow Jones Sustainability Countries <ul style="list-style-type: none"> • Dow Jones Sustainability Australia • Dow Jones Sustainability Canada Select 25 • Dow Jones Sustainability Korea • Dow Jones Sustainability Korea Capped 25 percent • Dow Jones Sustainability Chilli
MSCI KLD 400	4. United States of America only
Fortune Magazine Most Admirable	5. United States of America's most admirable firms
	6. World's most admirable firms
Vigeo Ratings	7. The Euronext Vigeo Indices. <ul style="list-style-type: none"> • Euronext Vigeo World 120, Euronext Vigeo Europe 120, Euronext Vigeo Eurozone 120, Euronext Vigeo EM 70, Euronext Vigeo US 50, Euronext, Vigeo France 20, Euronext Vigeo United Kingdom 20 and Euronext Vigeo Benelux 20
Ethibel Sustainability	8. The Ethibel Sustainability Indices (ESI)

Indices (ESI)	• ESI Excellence Global and ESI Excellence Europe
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Source: MSCI ESG Indexes (n.d.); RebecoSam Sustainability investing, 2016; Vigeo Eiris Rating (n.d.); Fortune, The World's Most Admired Companies (n.d.)

Further, rating agencies merely provide an aggregated score of CSR. They may create problems for researchers as sometimes they are interested only in specific CSR dimensions. Another important shortcoming is rating agencies incorporate a limited number of firms. In addition, many indices simply cover a particular region or country in terms of geographical area. Table 3 depicts information pertaining to the geographical area of the indices expressed in Table 2. Additionally, coverage of firms is also limited in terms of a number of rated firms. Basically, reputed indices concentrate on large and publicly listed firms. While, some of the reputed indices like MSCI KLD index and the Dow Jones Sustainability index exclude firms operating in an unsustainable manner such as alcohol, firearms, porn entertainment, tobacco etc. Even though many socially and environmentally responsible firms may not

include due to their geographical location, industry affiliation and firm size (Adam and Shavit, 2008).

(b.) Content Analysis

The second most commonly used index for measuring CSR performance is content analysis. "Content analysis normally include information determined construct of interest and codifying qualitative information to derive quantitative scales that can be used in subsequent statistical analyses" (Galant and Cadez, 2017). Content analysis is different from other indices with respect to many dimensions appraised and coding sophistication. The simplest way of coding is the count of sentences and words (Aras, et.al., 2010), within annual reports and other communication publications on the specific CSR dimensions under consideration with assigning binary variables ('0' and '1').

Several dimensions of CSR are being appraised, a binary score then assigns to each dimension then after an integrated score can be determined to calculate a composite index (Abbott and Monsen, 1979). A more sophisticated way of coding is pre-specification of CSR dimensions of interest and assign interval scores just like Likert Scale for each CSR dimension in terms of Social Involvement Disclosure Scale (SIDS). Based on this method, Abbott and Monsen (1979) create an index with twenty-four CSR indicators divided into six categories such as equal opportunities, environment, personnel, community involvement, product and others.

Recently, Yang et.al., (2009) ranked firms on the basis of five different CSR dimensions namely environment, employee relations, product quality, shareholders relations, customers relations and community relations on a 0-5 ranking scale (where 0 = fulfilment of no criteria and 5 = fulfilment of all criteria). Karagiorgos (2010) and Chen, et.al., (2015) in their study

did content analysis based on GRI reports. More specifically, Karagiorgos (2010) incorporated twenty-six indicators derived from GRI reports which were divided into two groups i.e. social and environmental indicators respectively and rated them on 0-3 rating scale such that 0 if the indicator is not taken into account while 3 if the indicator is fully taken into account. In the same way, Chen, et.al., (2015) incorporated forty-five indicators of GRI reports. They scored these indicators on 1-5 rating scale as 1 if indicator not reported while 5 if indicator fully reported by multiple raters. The most important benefit of this methodological approach is flexibility for the researcher who can choose CSR dimensions of his/her interest. They can collect data accordingly to their dimensional interest and also do coding of their collected data numerically for the purpose of statistical analysis. Whilst, this method also has some limitations as the researcher's subjectivity embedded at all levels of the research process. Another disadvantage is

window dressing in collecting information. Actually, CSR reporting are largely voluntary in nature in most of the developing countries but in India, it has been mandatory with the inception of the Companies Act 2013. Therefore most of the business organisations fail to disclose reports on their CSR activities even if they do engage in them.

(c.) Survey Method based on Questionnaire

Survey method based on questionnaire is basically used where a firm not rated by any of rating agency. This method is also used where firms annual reports are not available for doing content analysis. In these cases researchers need to collect primary data about CSR by sending questionnaires to corporate managers, CEOs, directors of CSR or conduct interview with them personally. At the earliest a survey method for collecting information by questionnaires related to CSR was used by Aupperle, et.al., (1985). The

components of Carroll's (1979) three dimensional model of CSR namely economic, legal, ethical and discretionary were used with eighty indicators in 20 sets of statements (each set include four statements such that one for each component of CSR) for calculating CSR performance. During survey method, respondents were asked questions to established the relationship between CSR and CFP. Rettab, et. al., (2009) is associated with different constructs for collecting data on CSR and CFP with the help of questionnaire.

Recently, a study conducted by Gallardo-Vazquez and Sanchez-Hernandez (2014) developed a CSR measurement scale anticipated to appraise socio-economic and environmental dimension of CSR. Consistent with the content analysis method, this method also have some advantages and disadvantages. This method also provide great flexibility for researchers like content analysis in terms of dimensional interest and choice of collecting data for these dimensions. Similarly, this method also have

limitation like bias responses from the respondents.

Generally, the biasness occurs at two levels, first more socially responsible firms are more likely to respond than firms those are less socially responsible (Cadez and Czerny, 2016). Second type of biasness is expectations from respondents as they may provide socially desirable answer albeit their actual behaviour may differ (Epstein and Rejc-Buhovac, 2014). An alternative approach for overcoming this drawback may be to collect data not only from enterprises but also from their stakeholders.

(d.) One dimensional Measures

One dimensional measure approach focus only on one dimension of CSR such as environment management or philanthropy. Environmental activities include pollution control investment data (Peng and Yang, 2014), use of carbon reduction strategy (Lee, 2012; Liu, 2012; Cadez and Czerny, 2016; Liu and Liu, 2016), adoption of world environmental standards (Dowell, et.al.,

2000), eco-control usage (Henri & Journeault, 2010), environmental proactivity (Prime and Cater, 2015), the ratio between toxic waste recycled and generated (Al-Tuwaijri, et.al., 2004), implementation of environmental management accounting (Mokhtar, et.al., 2016) and environmental sustainability policies (Naranjo-Gil, 2016) etc.

Many studies have been conducted related to philanthropic activities such that donations (Lin, et.al., 2009), public health policies (Naranjo-Gil, et.al., 2016) and growth in charitable contributions (Lev, et.al., 2010). This construct also have some advantages and disadvantages like others, one of the most important advantages is data availability in one dimensional measure of indices along with minimum data collection efforts and easily firms' comparison. Albeit the use of one dimensional construct is theoretical problematic as prior studies have shown that CSR is multidimensional concept (Carroll, 1979). Whilst one firm focus on one dimension such as employees

welfare and neglect the other such as environmental protection then it is tollay unjustified. Therefore a multidimensional operationalisation will consider CSR as mediocre while one dimensional operationalisation will detect either a low or high CSR and both are unjustified in each aspect of business organisation.

5. Review of Constructs Incorporated for Measuring Corporate Financial Performance

Infact, Corporate financial

performance generally measures with market based and accounting based indicators. The most frequently used indicators for measuring corporate financial performance are given in Table 4. Albeit, each indicator of measuring financial performance have both positive and negative characteristics. One of the common benefit of accounting based measure is they are easily available and are also comparable across the firms.

Table 4 the Most Commonly Used Measures of Corporate Financial Performance

S. No.	Market based Indicators	Accounting based Indicators	Both accounting and market based Indicators
1.	Stock Returns	Return on Assets (ROA)	Tobin's Q
2.	Change in Stock Returns	Return on Equity (ROE)	Market Value Added (MVA)
3.	Market Value of Firm	Return on Sales (ROS)	-
4.	-	Net Income	-
5.	-	Net Operating Income	-
6.	-	Return of Capital Employed (ROCE)	-

Source: Indicators identified by Author during literature review

While the most important advantage of market based measures is their contemporariness meaning of this is they reflect changes in CSR performance faster than that of accounting based measures.

Like other measures both the type of measures have advantages and disadvantages such that accounting based indicators are historical while total categories of these indicators fail to take

firm size into account e.g. net income (Al-Tuwaijri, et.al., 2004).

Similarly, accounting indicator like return of assets (ROA) may be proved biased if sample includes firms from different industries due to varying age and structure of size of assets across industries. In the same way the most important disadvantage of market based indicators is they are available only for public listed companies. Further market based measures inevitably incorporate systematic market characteristics such as recession etc. they are not firm specific while accounting based measures of financial performance are more sensitive to firm specific perceptions of CSR (McGuire, et.al., 1988). It has been evident from literature review that some researchers have incorporated both the type of measures of financial performance such as the ratio between market value to total assets (Tobin's Q) or market to book value of assets (Garcia-Castro, et.al., 2010; Rodgers, et.al., 2013). While others have also tried to derive a comprehensive measure of

corporate financial performance with the help of combining some of existing measures to form composite index. Peng and Yang (2014) employed factor analysis to integrate existing financial measures such as return on assets and return on equity, earning per share, cash flow to assets to form a composite single index. Likewise, one of the most important measure of financial health of the firm measured by using Zmijewski Score a method based on a firm's profitability, liquidity and leverage ratio, is another measure used as proxy for accounting based measure of profitability (Rodgers, et.al., 2013). It is noteworthy here that in recent there has been a tendency to use more than one sort of measure of corporate financial performance.

6. Discussion and Conclusion

The impact of corporate social responsibility on corporate financial performance has long been a debatable issue for corporate personnel (Cochran and Wood, 1984), researchers and academicians. Despite myriad empirical investigation on

the nature of relationship literature be unsuccessful to provide conclusive results.

Table 5 Merits and Demerits of Alternative Corporate Social Responsibility and Corporate Financial Performance Measurement Approaches

Measurement Approaches	Merits	Demerits
For Corporate Social Responsibility Measurement		
Reputation Indices	<ul style="list-style-type: none"> • Data availability • Firms' comparability • Multidimensionality 	<ul style="list-style-type: none"> • Not scientific • Compiled by private agencies • Limited firms coverage • Dissimilarities in geographical location, firm size, industry type etc.
Content Analysis	<ul style="list-style-type: none"> • Flexibility of Choice • Dimensions as per interest 	<ul style="list-style-type: none"> • Reserch subjectivilty • Data not disclosed • Impression management • Window dressing of information
Survey Method (Questionnaire)	<ul style="list-style-type: none"> • Flexibility of Choice • Dimensions as per interest 	<ul style="list-style-type: none"> • Reserch subjectivilty • Measurement error • Not proper response • Hide important information by respondents
One Dimensional Measurement	<ul style="list-style-type: none"> • Easy data availability • Comparability of firms 	<ul style="list-style-type: none"> • Theoretical invalidity • Biased
For Corporate Financial Performance Measurement		
Accounting-based financial Indicators	<ul style="list-style-type: none"> • Data availability • Comparability of firms 	<ul style="list-style-type: none"> • Historical data • Window dressing of information
Market-based financial Indicators	<ul style="list-style-type: none"> • Data Contemporariness 	<ul style="list-style-type: none"> • Availability of data only large and listed firms • Coverage of systematic factors

Source: Compiled by Authors based on literature review

The reaserch study focus on operationalisation and measurement aspect of research designs in the existing literature concerned with the relationship between

corporate social responsibility and corporate financial performance (Griffin and Mahon, 1997). The literature reviewed in this present study recognised a number of

approaches applied to establish the relationship between CSR and CFP and ascertain their merits and demerits. The main merits and demerits of these approaches are given in Table 5. It is depicted from the Table 5 that there is no perfect measure to estimate CSR and CFP. While the measurement issues are more pertinent to CSR because financial reports has a long history and also standardised.

Albeit, CSR disclosure or reporting is a more recent development where few standardisation has been achieved so far (Tschopp and Nastanski, 2014). Several reputation indices carry merits of availability of data and comparability across firms because of their standardized methods to compile them. Therefore, they are intensively used in empirical enquiry concerned with the nature of CSR and CFP relationship (Soana, 2011). However, these indices are far away from ideal measures of CSR. One of the most important demerits of them is that they are generally compiled by private firms and they have their own

agendas. They do not necessarily use rigorous methods that are usually expected in scientific research (Graafland, et.al., 2004). In addition another major drawback is an appraisal of limited coverage of firms. Agencies which are compiling and calculating indices usually focus on large, listed and well-known firms. This construct in selection of firms is bias in terms of great social pressure to be socially responsible.

Thus they are likely to perform better in this regard as less visible firms (Henriques and Sadorsky, 1999). Content analysis has the advantages of more flexibility to the researcher who can select himself/herself the dimension of CSR according to his/her interest, collect information related to the dimension and code them in order to create quantitative scores for analysis. But the main problem of this constructs is researcher's subjectivity that may compromised the reliability and validity of the findings. Albeit subjectivity is important at all levels of research process, another problem embedded to non-

disclosure of data. In addition the issue related to this approach is management impressions (Weber, 2008) which mean manipulation in reported information as what they are actually being done. Survey method through questionnaire is same as content analysis in terms of advantages even it is more advance in order to collect information from those companies they do not disclose their data by their reports publicly. Nonetheless the same approach faced the problem of subjectivity for researchers. As if questionnaire is not well designed in order to get valid and reliable results due to measurement error (Turker, 2009). In this approach the data collection is so sensitive as the answers of some questions are more socially acceptable rather than other answers (Epstein and Rejc-Buhovac, 2014). In the last but not least the problem of biasness in responses from respondents. It is well stable finding of survey method that better performing firms are more likely to respond rather than poor performing firms (Cadez and Czerny, 2016).

Finally, the method of one dimensional measure is often used because they are voluntarily available and comparable across the firms whereas this method of measuring CSR performance is theoretically invalid because of CSR is multidimensional phenomenon (Carroll, 1979). In fact one dimensional measure may also provide false conclusions as a particular firm may perform better in one CSR dimension and poor in another dimension, yet this construct is also failure to detect such incidences. Therefore, it is noteworthy in above discussion the incorporation of any measurement approach for CSR performance is not without disadvantages. They may influence potentially the association between CSR and CFP. But the two problems recognise to be inherent in all approaches, first the problem of researchers' subjectivity as this is researcher who selects variable, models and statistical tests to examine the association between the CSR and CFP. Hence, findings can be invalid even if the data is retrieve from reliable and

archival sources. The next one is biasness in selection of indices because of reputation indices normally include only those firms which are operationalising under greater pressure to be socially responsible (Epstein and Rejc-Buhovac, 2014; Henriques and Sadorsky, 1999). Whilst, firms which more socially responsible are disclosed their information publicly which prerequisite for conducting content analysis. (Abbott & Monsen, 1979). Similary, more socially responsible firms also responsd to questionnaires of survey method related to CSR (Cadez and Czerny 2016).

Thus all the approaches of CSR performance measures found to be biased to investigate positive relationship between CSR and CFP. These problems and shortcomings can be overcome through precautions as researchers subjectivity can be overcome by retrieving data from standardised CSR reports. Ramanathan (1976) articulated that corporate social accounting should be implemented with the aim of providing required information about

firm's social performance systematically, eventhough we are today fail to iron out the problem of accepted CSR reporting standard. However, many standardisation initiatives are in progesion world wide e.g. Global Reporting Initiative (GRI), United Nation's Global Compact Communication of Progress, Accounting Ability's AA1000 and ISO 26000 etc. The potential solution of the problem of biasness in responded by the respondents is mandatory disclosure of information like India. Albeit, many firms are publishing stand-alone CSR reports has increased drastically (Dhaliwal, et.al., 2012), in most of the countries CSR disclosure is not mandatory (Tschopp and Nastanski, 2014). In the European Union, the new directives on disclosure of non financial and diversify information has been mandated which into effect in 2017 (European Parliamentary Council, 2014), whereas in 2013, India has already made enactment of mandatory disclosure under the Companies Act, 2013 (GOI, 2013).

The review study conclude that the measurement approaches for performance of CSR concept documented that all the methods deployed in empirical literature undergo some shortcomings that may have an effect on the examination of CSR-CFP relationship. It was found in the literature that the problems inherent in most of the approaches are researchers subjectivity and selection bias. Researchers argue that potential solution of former is standardisation of CSR reporting whereas later's mandatory disclosure of CSR information. In this way standardisation and disclosure will not only be beneficial for testing validity of CSR-CFP relationship but also for taking decisions and making policies by policy makers and various stakeholder groups (Galant and Cadez, 2017; Henriques and Sadosky, 1999; Hillman and Keim, 2001).

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