Corporate Social Responsibility and Earnings Management: Measurement Approach Review

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Abstract

Objective – This study examines conceptually corporate social responsibility and earnings management measurement approach review. It reviews existing measurement approaches used in the empirical studies. Problems that led to lack of standardize measurement approach for both CSR and EM were identified and the solutions to the problems were highlighted.

Design/methodology – Explanatory research design was employed in the study to review measurements approach for the earnings management and corporate social responsibility used by previous empirical studies.

Results – The review of measurement approach reveals that up to today there is no standardized way to measure CSR and EM as studies normally select the method that suit their purpose. Some of the points of contention among scholars were lack of consensus on the best and standardized way to measure CSR, subjectivity and bias issue with regards to measurement, myriads of models for EM measurement and the voluntary nature of CSR activities and disclosure way. However, in order to address the contentious issues, this study, therefore recommends that relevant agencies should set up standardize way to measure CSR of different companies, on their part government and authorities concern should find way to standardized CSR reporting, makes CSR activities and disclosure mandatory for companies and separation of measurement approach for financial related business companies and non-financial related business companies should be done.

Keywords: Earnings Management, Companies Social Responsibility, Measurement Approach, Companies.

1. Introduction

The lack of consensus among scholars is becoming problematic on the review of measurement approach of earnings management (EM) and corporate social responsibility (CSR) concepts. Corporate Social Responsibility (CSR) can be defined as a framework which leads and encourages a company’s actions to be more responsible and give positive impacts towards the various stakeholders including the environment, customers, employees, and communities (Ahmed & Tahir, 2019). Different measurement approaches exist in the literature for measuring CSR Adriana and Simon (2017) and for measuring earnings management (Persakis & Iatridis, 2016). As a basic means of meeting the expectation of the society on companies. CSR activities focus mainly on the welfare of the communities, in such a way that demands and needs of the communities are met by companies, this is done by taking communities demand to be part of the business decision making process. Some researchers argued that businesses are part of the society, and they depend on the society to achieve their economic goals (Matten & Moon, 2008; McWilliams, Siegel, & Wright, 2006). As component of the stakeholders, communities are part of the business; therefore, CSR is also defined as an organization’s commitment to operate in an economically and environmentally sustainable manner while recognizing the interests of all its stakeholders (Carroll, 1979). Carrol also categorized and sees CSR into four
responsibilities, economic, legal, ethical and discretionary (Carroll, 1979). The Scholar argued that CSR must be carry out in form of four pillars mentioned which companies must adhered to in order to said is engaging in CSR activities.

The emphasis here is that companies are not only requires to fulfill their economic mission, but also to obey the law, value the ethics, and do charity work to the communities. According to Fodio et al. (2013) CSR is defined as a mechanism that constitutes and envelopes all the stakeholders. Moreover, Mukhtaruddin et al. (2014) sees CSR as an action carried out by company (according to the ability of the company) as to the form of their social responsibility and their operating environment. However, Ngoc (2018) defined CSR as a voluntariness of the enterprise committing itself to comply with regulations of labor, environment, and business activities while basing its operations on national laws, international general rules, and ensure harmonious benefit of parties together with sustainable development of national socio-economic activities.

In the light of the above, scholars have attempted and offered CSR definitions. The concept was viewed differently by scholars and it seems there is no standard acceptable definition globally; it depends on how scholars view it. Based on this, contentions exist as to the measurement approach both for CSR and EM concept. Hence, objective of the study is to examine various measurement approach use to measure CSR and EM by scholars and take position on reasons why researchers use certain approach to measure. In view of the above, CSR is seen as company commitment to integrate economic, environmental and social objectives in to business decision making. It is the way that companies appreciates stakeholders support and say thank you for supporting the business.

On the other hand, earnings management according to Dechow et al. (1995) is the manipulation of earnings, both inside and outside the boundaries of acceptable accounting principles generally. On their parts, Kothari et al. (2012) defined it as managers’ intervention in the financial reporting process by exercising discretion and judgement to change reported earnings without any cash flow consequences.

Moreover, Watts and Zimmerman (1990) defined EM as concept that allow managers exercise discretion over accounting numbers with the intention to either mislead some stakeholders about the underlying economic performance or to influence contractual outcomes of the company. This definition portray the fact that motivation behind EM practice by managers is to either mislead stakeholders about the firm’s financial performance or to achieve a certain level of profit with the purpose to benefit themselves or the company.

Worthy to note is that EM arises because of the loopholes in generally accepted accounting standards that allow managers of companies to report some financial matters at their discretion. This loophole gives managers opportunity to use CSR activities to cover up EM practice. This is to say that managers may be driven by self-interest (Jensen & Meckling, 1976). However, Scholtens and Kang (2013) contend that firms with active CSR initiatives are likely to suppressed EM. Further, Prior et al., (2008) argued that companies that engage in EM practices would have negative consequences on the financial performance and eventually affect their relationship between CSR and FP.

More so, Rahmawati and Dianita (2011) posited that managers may use their opportunity to engage in EM, which definitely affects stakeholders’ interest and if companies improve their CSR as the consequence of EM, the positive impact of CSR on financial performance would be reduced significantly. This is based on the fact that companies whose partake in EM tend to cover by investing in CSR activities. Sometimes they carried out CSR activities to achieve their managerial opportunism, this act is known as EM (Y. Almahrog, Marai, & Goranka, 2015). In view of the connection, EM is perceived as an act that is inconsistent with CSR principles, thus, combining CSR practices with EM is at detriment to the business stakeholders.

Investigation from the literature provides evidence that managers may use CSR
activities to cover up earnings management (Grecco, Geron, & Grecco, 2017; Maharani & Soewarno, 2018; Rahmawati & Dianita, 2011). This might have effect on the financial performance, therefore debate on the relationship between CSR and EM has been ongoing but empirical studies on their relationship reveals conflicting results. Some studies found positive relationship, others found negative relationship, while some also reported no or mixed relationships. Despite this diversity, theoretical and empirical contributions were made to the area. However, the review showed that three problems exists, lack of consensus among scholars, measurement problems and voluntary nature of the CSR as the disclosure is voluntary, hence companies are doing it the way they feels it is best for them. Perhaps these problems are due to selection bias and subjective nature of researchers. In the light of this, this paper reviews operationalization and measurement approaches for the CSR and EM. The remaining part of this paper are structured as follows: section two is the conceptual review; followed by section three which reviews empirical researches as well as measurement approach of CSR and EM; while section four is the research method and section five is the discussion and finally last section six present conclusion and recommendations.

2. Conceptual Review

Concept Overview of Corporate Social Responsibility (CSR)

Wide range of definitions exists in previous studies; unfortunately there is no consensus on the various definitions of the term CSR. Perceptions on CSR concept differs among scholars, practitioners, companies, managers and even the general public. For instance, some scholars are of the view that the concept is not relevant and important to companies as companies are require by the funders to make economic progress and focus only on what should increase profits and enhanced share value (Friedman, 1970). On the contrary, different views by Carroll (1979) assert that CSR requires companies to pay attention beyond its economic progress, that companies should consider the interest of both stakeholders and shareholders.

Due to lack of consensus and heat debate of the concept of CSR, it is view differently with different opinions, the prime idea of CSR is that companies should stay within the rules of the games and remedy effects of their operations on communities through engagement in CSR activities. It is explicit that companies should go beyond meeting the needs of shareholders and includes the needs of all stakeholders in the business decision making. The Commission’s definition is in line with Carroll (1979) definition of CSR as it explicitly includes the interests of stakeholders other than shareholders alone. Business for Social Responsibility (BSR) definition emphasized that companies should be addressing legal, ethical, commercial and other expectations of the society. It also demands that companies should take decisions that fairly balance the claim of all key stakeholders in the business. CSR is also defined as the impact of a company’s activities on the welfare of society (Henderson, Peirson, & Herbohn, 2011). Moreover, Almahrog et al. (2015) viewed the CSR as the responsibilities of corporations to all stakeholders to be accountable not only to the shareholders but to also to stakeholders where they generate profits.

Looking at the CSR definitions offered by various scholars, they emphasized the needs for companies to be socially responsible and strive to satisfy the collective demands of the stakeholders instead on focusing only on the shareholders. Some definitions also portray the importance of combining aspects of economic, social and environmental activities in to CSR initiatives while some stress the fact that CSR is voluntary activities not imposed by law. On this note, voluntary nature of the CSR motivates companies to engage in CSR activities due to some benefits they drive, summarized the ben-
Earnings for companies that are socially responsible: find it easier to attract resources, obtain quality employees, market products and services easily, create unforeseen opportunities and serve as an important source of competitive advantage. Similarly, Weber (2008) reported five potential benefits of CSR for companies; attract positive effect on a company's image and reputation; result on employees' motivation, result to cost savings; increased revenue from higher sales share and reduction of community operation risk.

**Earnings Management: Concept Overview**

In accordance with Watts and Zimmerman (1990) EM is a concept that allow managers exercise discretion over accounting numbers with intention to either mislead some stakeholders about the underlying economic performance of the company, or to influence contractual outcomes. This definition stressed the fact that motivation behind EM practice by managers is to either mislead stakeholders about the firm's financial performance or to achieve a certain level of profit with intention to benefit themselves or the company. More so, Dechow et al., (1995) defined EM as the manipulations of earnings both inside and outside the boundaries of the acceptable accounting principles generally. In addition, Abdullahi (2014) stated that EM is a choice of accounting policies used by managers to achieve their self-interest by misleading stakeholders via presenting distorted financial statements.

In their contribution to the concept, Agbeye and Austin (2016) opined that manipulation of accounting information to achieve a desired purpose is earnings management. It is worthy to know that sometimes managers exploit flexibility in accounting standards to carry out EM. In the light of the foregoing, this study defined earnings management as the presentation of false information about the financial performance of an entity by manipulation of accounting numbers to deceive accounting information users.

However, EM practice poses threats to companies' stakeholders especially equity holders. The practice involves altering earnings by company managers to meet predetermined targets at the detriments of stakeholders. On this reasons this study summarized the disadvantages associated with the practice of earnings management which includes among others creating negative effect on company goodwill and reputation; company losing support of stakeholders; negative effect on company financial performance. Meanwhile, Managers that carry EM practice may have their purpose, on this regards, in Almahrog et al., (2015). According to Healy and Wahlen (1999) three major motives were identified for earnings management. Capital markets motives; contractual arrangement motives; and regulatory considerations motives.

**Empirical Evidence on CSR-EM Relationship**

An empirical result from previous studies fails to provide conclusive evidence about the nature of the CSR–EM relationship. This happened perhaps due to some reasons however, Scholars provide possible explanations for such inconclusive evidence (Prior, Surroca, & Tribo, 2008). For instance, reasons include among others, poor theoretical foundation of the CSR (Ruf, Muralidhar, Brown, Janney, & Paul, 2001). Omission of relevant variables in models specifications (McWilliams et al., 2006). Lack of a clear direction of causality (Waddock & Graves, 1997). Measurement issues Griffin and Mahon (1997), and Sampling limitations (van Beurden & Gossling, 2008). This is not surprising as researches are carried out under different geographical settings and each setting has its rules and regulations guiding the activities of companies. In the light of the contentious reasons revealed by previous empirical studies as indicated the positive, negative and mixed results between CSR and EM. In order to substantiate this claim of the literature, some previous studies were consulted and reviewed and the table 1 summarized the main findings of the studies.
Table 1. Summary of Findings CSR-EM Relationship from Empirical Studies

<table>
<thead>
<tr>
<th>Nature of the Relationship Between CSR-EM</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Relationship</td>
<td>Moratis &amp; Egmond (2018).</td>
</tr>
<tr>
<td>Mixed Results</td>
<td>Almahrog et al., (2015); Susanto (2016).</td>
</tr>
</tbody>
</table>

Table 1 shows that positive relationship was found between CSR and EM, this suggest that CSR has a positive relationship with EM. On the contrary, the table also shows studies that found negative association between CSR and EM, such findings reveals that EM has negative relationship with CSR, this suggest that managers sometimes uses CSR activities to cover up EM practice which results to damaging shareholders interest at the expenses of managers gain. It also shows studies that documented no relationship; these studies suggest CSR and EM do not have any relationship.

The last results on the table detected mixed relationship between CSR and EM which suggest that companies with high CSR performance might have high EM practice; companies with moderate CSR performance might have low EM practice, whereas companies with highest CSR activities might also have highest form of EM practice.

Summarily, it is obvious that empirical studies do not provide conclusive results on the nature of the CSR–EM relationship, perhaps possibly because the studies were conducted in different geographical settings using different variables of measurements of both CSR and EM, different sectors of the economy. Of course, researchers did their best but there is no unanimous agreement on the direction of the relationship. Therefore, it is necessary to carry out a study on the measurement review approach so as to have a more thorough and elaborate understanding of the relationship between CSR and EM.

**Measurement Approach of Corporate Social Responsibility**

Globally there is no best way to measure CSR, for instance, researchers like McWilliams et al. (2006) and Almahrog (2014) are yet to agree on the best way to measure CSR. Due to this reason, different measuring instruments were introduced to measure CSR. Some studies consider choice of the measuring instrument based on the availability of data and the country of the study, therefore, careful consideration of the situation at hand should be consider by researchers before choosing any method. The following are ways of measuring CSR.

1) Rating Agencies Reputation Indices

Major Indices that are used by studies for measuring CSR includes KLD 400 social index, Fortune magazine reputation index, Dow Jones Sustainability Index, and Vigeo Index, these four indices are commonly, however, in addition to these major indices, there are also minor national indices like the Index of CFIE-French Corporate Information Centre for French companies respect index for Polish companies and CSR Index for Croatian companies. Rating indices are similar and mostly common themes are used in appraising and measuring CSR, for instance researchers that utilized this CSR measurement includes among others (Ducassy, 2013; Girerd-Potin, Jimenez-Garcés, & Louvet, 2014; Skare & Golja, 2012). Moreover Deckop, Merriman, & Gupta (2006) argued that the most commonly used among the reputation indices is the KLD 400 social index.
Meanwhile, these reputation indices have some strengths which includes multidimensional nature of CSR as the themes are quite similar to each other; consider interest of all stakeholders and made data readily available for public companies. However, some indices like DJSI covers areas of risk and crisis management in companies and is the one that cover all industry sectors as they allows comparability of data across companies. moreover, they have some weaknesses which include data is normally obtained by private firms that have their own agenda and do not necessarily use scientific methods; limited coverage of firms CSR activities in terms of geographical area, many indices simply cover a particular region or country where rating agency is situated; concentrate on large and publicly listed companies and exclude companies operating in industries considered non-sustainable like tobacco and alcohol companies.

2) Content Analysis

Content analysis is the second popular method of measuring CSR. Content analysis involves transforming qualitative information in to quantitative information through codification of data by assigning binary numbers to describe the data e.g 0, 1 and then subject the data into statistical analysis. According to Aras, Aybars, & Kutlu (2010), content analysis involves counting words or sentence in reports and publications on the specific CSR issue under consideration. Researchers like Leuz, Nanda, & Wysocki (2003); Mustaruddin, Norhayah, & Rusnah (2011); Uadiile & Fagbemi (2011); Iqbal, Ahmad, Basheer, & Nadeem (2012); Tilakasiri (2012); Wuncharoen (2013); Al-Najjar & Abed (2014); Almahrog (2014) and Rodriguez-Fernandez (2016) utilized this method to measure CSR. The strengths of this method include flexibility, simplicity compared to reputation indices. However, they also possessed some weaknesses includes bias from the researcher because column sizes, print sizes, and page sizes may differ from one annual report to another and subjectivity may occur from the selection of CSR dimensions of interest.

3) One Dimensional measure

This measure, focus only on a single dimension of CSR, for example environmental care or philanthropic responsibility. Examples of environmental activities include spending on pollution control, deployment of a carbon-reduction strategy (Liu & Liu, 2016), eco-control usage (Henri & Journeault, 2010), the ratio of toxic waste recycled to total toxic waste generated (Al-Tuwaïjri, Christensen, & Hughes, 2004). Adoption of global environmental standard and environmental management accounting implementation issues (Joseph & Michah, 2016). Examples of philanthropic activities include donations. The strengths of this method include data availability at all time, comparability across firm and the drawbacks are CSR is multi facet while one dimensional measure focus only on one aspect, so this is actually a problem and agitation may arise from the community if company focus on only one CSR aspect for instance, internal CSR employee welfare and neglect environmental or philanthropic.

4) Field Survey Questionnaire

Field survey in form of distribution of questionnaires to respondents of either company employees or community members are gathered and analyzed by researchers to assess the level of CSR activities by companies. Field survey questionnaire provides researchers with the opportunity and advantage to design questionnaire that suit their purpose. This form of survey questionnaire was used by (Bayoud, Kavanagh, & Slaughter, 2012; Krishnan, 2012) The strengths includes flexibility because researchers can design questionnaires to suit their objective, simplicity and the weaknesses includes personal biases, costly, measurement errors and uncertainty about the return rates.

Earnings Management Measurement Approach

Studies are yet to have consensus on the method to measure EM, some used accrual earnings management approach (Almahrog et al., 2015; Dechow et al., 1995;
Healy & Wahlen, 1999; Marai & Pavlovic, 2014), while others Gunny (2010) and Martínez-Ferrero, Gallego-Alvarez, & García-Sánchez (2015) used real earnings management approach to detects earnings management, however, accrual approach is the most popular and normally used in accounting field. Moreover, scholars have developed different methods of detecting EM, In the light of the foregoing; this study examined different methods used to detect earnings management.

1) Healy Model

Healy (1985) described total accruals as one which include non-discretionary and discretionary accruals. He developed a model that measures total accruals as the difference between reported earnings and cash flow from operations. He argues that earnings management occurs in every period and that in the absence of earnings management, the expected total accruals will be zero in the estimation period. Therefore, the basic idea in his model is that EM is the estimates of discretionary accruals using total accruals scaled by lagged total assets in the estimated period.

\[ DA_{it} = \frac{TA_{it}}{A_{it-1}} \]

Where:
- \( DA_{it} \): Discretionary accruals for firm i’ in year t.
- \( TA_{it} \): Total accruals of firm i’ in year t.
- \( A_{it-1} \): Lagged total assets of firm i’ at beginning of year.

Meanwhile, this model cannot stand without criticism, a number of errors were observed with led to the development of DeAngelo Model.

2) DeAngelo Model

DeAngelo (1986) also viewed total accruals as the sum of the discretionary and non-discretionary accruals. The scholar calculates total accruals as the difference between net income and cash flow from operations. She posits that as a result of the changes discretionary accrual is due, total accruals is the difference between current and previous years’ accruals. She further explains that only economic conditions reveals EM not model, however, DeAngelo assert that the non-discretionary accrual in period t is equal to the non-discretionary accrual in period t-1, hence the difference between them is related to EM.

\[ DA_{it} = \frac{(TA_{it} - A_{it-1})}{A_{it-1}} \]

Where:
- \( DA_{it} \): Discretionary accruals for firm i’ in yeart.
- \( TA_{it} \): Total accruals of firm i’ in year t.
- \( A_{it-1} \): Lagged total assets of firm i’ at beginning of year.

However, DeAngelo Model also suffers setback as it is major weakness is the believe that earnings management is a systematic. So also, Kaplan (2001) further argued, restrictive model for calculating discretionary accruals because it ignores non-discretionary accruals fluctuate with the firm’s economic circumstances.

3) Jones Model

Jones introduced a model to overcome the limitations of DeAngelo (1986) model. Jones attempted to capture earnings management by assuming that change in total accruals would bring a change in revenue and gross property, plant and equipment in the stated period. He proposed a regression model that controls for change in revenue and depreciation. Meanwhile, he believe that variations of revenue would bring variations
on operating capital, thereby causing change in accruals, and the depreciation on property plant and equipment which would decrease the accruals.

Moreover, Jones applied two equations to calculate EM, firstly equations i is used to get the coefficients and the equation ii is used to get the discretionary accruals.

\[
TA_{it}/A_{it-1} = \alpha_1 (1/ A_{it-1}) + \alpha_2 (\Delta REV_{it}/A_{it-1}) + \alpha_3 (PPT_{it}/A_{it-1}) + \epsilon_{it} \ldots \ldots \ldots . (i)
\]
\[
DA_{it} = [TA_{it}/A_{it}] - [\alpha_1 (1/ A_{it})] + \alpha_2 (\Delta REV_{it}/A_{it}) + \alpha_3 (PPT_{it}/A_{it-1}) \ldots \ldots \ldots (ii)
\]

Where:

- \( TA_{it} \): Total accruals for firm \( i \) in year \( t \).
- \( \Delta REV \): Change in revenues for firm \( i \) in year \( t \).
- \( PPT_{it} \): Gross property, plant and equipment for firm \( i \) in year \( t \).
- \( A_{it-1} \): Lagged total assets.
- \( DA_{it} \): Discretionary accruals of firm \( i \) in year \( t \).
- \( \alpha_1, \alpha_2 \) and \( \alpha_3 \): Parameters.

Even though, Jones made effort to capture changes in economic activities in his model, however, Dechow et al. (1995) modified his version of the model and came up with what is known in the literature as modified Jones model.

4) Dechow, Sloan and Sweeney Model (Modified Jones Model)

Jones model were modified by introducing a number of changes in order to improve its ability to actually and correctly detect EM. This model is considered the most popular model of detecting EM. The researcher assumed and considers all the variances of revenues to be non-discretionary items. This is done by removing the change in receivables from change in revenues to exclude the element in the change in revenue that is expected to be managed through managerial discretion. They argued that managers might use credit sale to manage earnings; in essence managers use credit sales for estimation rather than the cash sales.

\[
DA_{it} = [TA_{it}/A_{it}] - [\alpha_1 (1/ A_{it})] + \alpha_2 (\Delta REV_{it}/A_{it-1} - \Delta REC_{it}/A_{it}) + \alpha_3 (PPT_{it}/A_{it-1}) \ldots \ldots \ldots (iii)
\]

Where:

- \( DA_{it} \): Discretionary accruals of firm \( i \) in year \( t \)
- \( \Delta REC_{it} \): Change in receivables of firm \( i \) in year \( t \)

The weaknesses of this model lies on the fact that the entire change in receivables in the year is discretionary accruals, this tends to overstates accruals and forget the fact that the change in receivables results from a firm’s economic circumstances.

<table>
<thead>
<tr>
<th>S/N</th>
<th>Accrual Earnings Management</th>
<th>Real Earnings Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Timing is accomplished after fiscal year-end in accrual EM</td>
<td>Timing is accomplished before fiscal year-end in real EM</td>
</tr>
<tr>
<td>2</td>
<td>Accrual EM does not alter operating activities and involve cash transactions because it changes accounting methods or estimates.</td>
<td>Real EM needs to change underlying operation activities, mostly accompanying cash transactions.</td>
</tr>
<tr>
<td>3</td>
<td>Accrual EM can be exposed to regulator’s scrutiny, litigation, and audit risk because managers seem to change accounting methods without a good reason after fiscal year-end.</td>
<td>Real EM can avoid regulator’s scrutiny, litigation, and audit risk, because managers make real transactions affecting the current and future cash flow.</td>
</tr>
<tr>
<td>4</td>
<td>Unlike real EM abnormally changing the current and future cash flow, managers mostly use their discretionary power in choosing the accounting</td>
<td>Real EM is more costly than accrual-based earnings management due to distorted normal operating cycle.</td>
</tr>
</tbody>
</table>
methods after fiscal year end for accrual-based earnings management.

| 5 | Provision of credit losses, timing of the amount of unusual items and inventory valuations are examples of accrual EM. | R & Expenditure, sales discounts, advertisement and administration expenses are examples of real EM |

Source: Researcher Compilation, 2019

3. **Research Method**

Explanatory research design was employed in the study to review measurements approach for the earnings management and corporate social responsibility used by previous empirical studies.

4. **Discussion**

Based on the aforementioned discussion in the literature, empirical studies are yet to have consensus on the best measurement approach for corporate social responsibility or earnings management. Nevertheless, the measurements issue is more pertinent for CSR because researchers normally have bias and subjectivity in selecting the measurement approach to use, but unlike EM. From the studies reviewed, it is understood that there are several models for measuring EM and improvement have been made since the development of the first model by Healy (1985) to the Kothari et al. (2005) based on this we understood that the history of EM has been largely standardized while CSR reporting is a recent development where little standardization has been achieved so far to some extent and the scholars normally used the modified Jones model as the best model to measure EM. On the other hand, in terms of CSR, scholars select the measurement approach they think would satisfy their needs. Some used reputation indices, others used content analysis, and some used one dimensional measure while others use questionnaire survey which often times allows subjectivity and bias. Though, reputation indices carry the advantage of availability and comparability across firms, this is the reason they are widely used in empirical studies concerning CSR (Soana, 2011).

Nevertheless, the disadvantage of the indices is that it is compiled by private firms that have their own agendas not necessarily the same with companies’ agendas and has limited coverage of appraised selected companies. On the other hand, content analysis carries the benefit of high flexibility for the researcher. A researcher can self-select the CSR dimensions of interest, collect information concerning the dimensions, and code information in order to generate quantitative scores for potential subsequent quantitative analyses. Another disadvantage is the researcher subjectivity that may compromise the validity and reliability of results. Meanwhile, questionnaire surveys are similar to the content analysis in terms of advantages; this approach also allows approaching firms that do not disclose data publicly. However, this same approach suffers from researcher subjectivity and response bias (Turker, 2009). Finally, one-dimensional measures are often used because they are readily available and comparable across companies. Carroll (1979) stated that the main problem with one-dimensional measure is the theoretical invalidity since the CSR concept is clearly multidimensional. In essence, one-dimensional operationalization may easily provide false conclusions since a particular company may be performing high in terms of one CSR dimension and lower in terms of another CSR dimensions, yet one-dimensional measure will not detect such issue as it only pay attention to one dimension of interest.
5. Conclusion and Recommendations
From the discussion so far, the use of measurement approach for CSR and EM is not without drawbacks and this may actually affects the potentiality of the relationship between CSR and EM.

In conclusion, the review of measurement approach reveals that up to today there is no standardized way to measure CSR and EM as studies normally select the method that suit their purpose. The major problem identified is the lack of consensus and the researcher subjectivity, selection bias, CSR disclosure and its activities is voluntary. The problems actually affect the researchers' ability to examine the relationship between CSR and EM. To overcome the problems, the study recommends that government and authorities concern should find way to standardized CSR reporting, makes CSR activities and disclosure mandatory for companies and separation of measurements approach use for financial related business companies and non-financial related business companies.

Presently, CSR activities and even it is reporting is not mandatory, for instance, in countries like France, Denmark and Sweden (Tschopp & Nastanski, 2014), this also gave rise to problems in standardizing the measurement issues as there is no legal imposition on it. However, In the European union, governments are trying to change the directive on disclosure of CSR issues as there are requirements on some large companies and groups to disclose information on policies, risks and outcomes regarding environmental matters, social and employee aspects and respect for human rights issues (European Parliament & Council, 2014).

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