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Carbon emission: Motivation to disclose

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Abstract

Reporting carbon emission is one of the crucial steps in to effectively managing carbon footprint and mitigating climate change. Countries around the world has been encouraging their private and government organizations to voluntarily disclose their carbon emissions with the absent of mandatory regulations. Reporting carbon footprint not only alert organizations of their contribution to climate change; but also provide the basis for the country in determining whether they can achieve their carbon emission reduction target and sustainable environment. In many countries, despite its voluntary reporting environment; previous studies have shown that numbers of organizations have produced carbon disclosures. On the other hand, despite the mandatory requirements, some companies (such as in the UK) do not disclose their carbon footprint data and practices. This situations suggests that there are more motivation factor other than regulation that pushing organizations to disclose carbon emission data. Hence, this paper aims to investigate the motivating factors that inspire and impact the organizations' carbon disclosure behavior in voluntary and mandatory environment. The finding shows that image and reputation appear to be the key motivations of carbon disclosure, regardless of whether the regimen is voluntary or mandatory. In addition to that, no doubt that regulation requirements is one of the important reasons for disclosure in mandatory environment.

Keywords: GHG, carbon reporting, motivation, barriers, climate change, emission, footprint

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1.0 INTRODUCTION

> *"By 2011 we had used up two thirds of the emissions compatible with a warming goal of 2ºC. Since 2011 we have consumed some more of the remaining slice of the pie. At current annual emission rates of about 40 billion gigatonnes of carbon dioxide equivalent, we will use up the rest of our carbon budget in about 20 years." (Hoesung Lee, Chair of the IPCC, 2017)*

The planet need to be sustained for future generations. In doing so, we need to ensure that the effect of climate change is mitigated. This is because, climate change does not respect national borders; it affect people everywhere and in many ways such as the reduction in food supplies, the occurrence of natural disasters and the destruction of natural habitat. To address climate change, countries adopted the Paris Agreement at the COP21 which taken place on 12 December 2015 in Paris. In the agreement, all countries agreed to work to limit global temperature rise to well below 2 degrees Celsius, and given the grave risks, to strive for 1.5 degrees Celsius. Failure to achieve this limit would cause over a quarter of the land on earth to dry out.

As the one of the main contributor of climate change is carbon emissions, many countries have taken the initiatives to reduce their emissions by setting the 5 years emissions target. In achieving this target, government have to measure the country's total emissions, and in doing so need cooperation from all parties involved including businesses. Consequently, some countries encourage their businesses to voluntarily disclose their emission data, while country like United Kingdom have made it mandatory.

Besides assisting government in achieving the emission target, increase awareness amongst stakeholders has also contribute to the increase in such disclosure. A general increase in the demand for corporate accountability in the mid-1990s as a result of numerous global corporate scandals has driven stakeholders to request more transparent information to safeguard their interest in the corporation (Swift, 2001). In addition, the Earth Summit in 1992 and the Kyoto protocol in 1997 have raised awareness and knowledge from the general public that climate change and carbon emission imply real environmental risks for corporations (CDP, 2008; CERES, 2008). Scandals and malpractice of environmental and social issues involved some Corporations (such as Shell and Wal-Mart) have received public attention and significantly impaired their reputation, image and brand (Nurse21, 2014; Bekefi and Epstein, 2008; Bekefi, Jenkins, and Kytle, 2006; Anderson, 2006).

Since the late 1990s, a number of voluntary government schemes and non-governmental initiatives have emerged, which encourage enterprises to measure and report their GHG emissions (Kauffmann et al, 2012). In the UK, organizations can voluntarily make the disclosure through Carbon Disclosure Project (CDP) or follow the voluntary guidelines such as DEFRA guidelines and GHG Protocols. CDP is an international, not-for-profit organization providing a global system for companies and cities to measure, disclose, manage and share vital environmental information. CDP holds the largest database of corporate climate change information in the world and has been operating for over a decade. It has become the mechanism for organisations worldwide to measure and disclose GHG emissions and climate change risk information. In the UK, CDP requests information from the largest 600 listed companies on behalf of 551 investors with £71 trillion in assets under management (CDP and CDSB, 2011). When CDP launched its first FTSE 350 report in 2006, only 49% of companies responded to the questionnaire (CDP, 2012). In 2012, 69% of companies (96% of the FTSE100) responded, disclosing more information than ever before (CDP, 2012). The figure shows that "the companies are increasingly responsive to CDP's request, which shows that business sees the threats and opportunities presented by climate change as real and material" (CDP, 2012 pg. 11).

Mandatory Carbon Reporting Requirements (MCRR) was introduced by the UK government in August 2013 as an important step in seeking to manage corporate carbon emissions. Despite the increment in voluntary carbon reporting, the preliminary study done by the authors found that there were cases of non-compliance or not full compliance in the first year of MCRR introduction. Similarly, previous studies in environmental reporting evidenced that many companies fail to comply with mandatory requirements and the disclosure quality is low (Adams et al, 1995; Larrinaga et al, 2002; Llena et al, 2007 and Criado-Jimenez et al, 2008). Therefore, this situation would suggest that regulation is not the only driver that motivate organizations to disclose their carbon information. This statement lead to the formation of the research question as below.

1.1 Research Questions

- Why companies voluntarily disclose their carbon emissions data?
- What are other motivation factors (beside regulation) that push organization to disclose emission data in mandatory environment?

1.2 Objective of the Study

- To investigate the motivations factors that influence company's decision to disclose their carbon emissions data in voluntary and mandatory environment.

2.0 LITERATURE REVIEWS

2.1 From Voluntary to Mandatory

Through reviewing the literature on carbon emission and reporting, we can see that the practice and development of voluntary disclosure standards on carbon emission (particularly, in the United Kingdom) were spreading from the mid-2000s to 2011. However, the quality of reporting (and disclosure) and standardization information on carbon emission have been criticized (Okereke, 2007; Hutchison and Lee, 2005). For example, Okereke expresses that "there are variations in the carbon metrics used for tracking and reporting and in the baselines used, all of which create enormous comparability problems for understanding processes and evaluating performance" (Okereke, 2007, p. 19). Criticisms on voluntary disclosure would imply that a standard requirement and guidelines through mandatory enforcement would be necessary for solving the weaknesses of voluntary reporting.

Despite many companies voluntarily disclosing and reporting their climate change-related information, Sullivan and Gouldson (2012) argue that investors have constantly criticised these companies for not supplying them the information needed for investment decision-making. According to Sullivan and Gouldson (2012), investors have limited interest in companies reporting in relation to carbon and climate change due to the low quality of disclosed information that does not assist them in making a meaningful comparison between companies. Comparison is one of the main drawbacks of voluntary reporting. Kolk et al (2008) and Andrew and Cortese (2011) who has examined the CDP disclosure concluded that CDP is successful in increasing the response rates, but less successful in encouraging comparable and reliable emission data. This is because the responding companies used a combination of methods for their disclosure (Andrew and Cortese, 2011). As related to CDP, year by year comparisons are difficult as the questions change from year to year (Kolk et al, 2008; Stanny, 2013). The comparison is harder when a large number of companies either did not respond at all to the CDP or choose not to provide emission data (Andrew and Cortese, 2011). Similarly, comparison and evaluation are hard when companies do not fully comply with DEFRA GHG reporting guidelines and report a wide variety of data in different style (Deloitte, 2010).

Drawbacks with voluntary reporting, including the perceived deficiency in the quality of information on carbon and climate change, and increased stakeholder demand for accountability have increased interest in and demand for more mandatory reporting for corporations (Hess, 2007). In 2012 the UK government announced its intention to introduce mandatory reporting requirements for large companies' signalling a step change in the debate. The mandatory reporting requirement aims at improving the voluntary reporting and addressing the issues of quality information and investors interest. Generally, mandatory reporting offers numerous improvements such as the formation of standardized and comparable measures that enable benchmarking and best practices (Hess, 2007). The well created and effective execution of mandatory carbon and climate change reporting can best support information-based governance by addressing the limitations in the information being provided by corporations. Even though establishing mandatory reporting is not a remedy to all of the issues over data quality, consistency and comparability, it can at least promote better data transparency as well as meaningful engagement between stakeholders and organization to work together to find "mutually agreeable solutions" (Hess, 2007 p.470).

2.2 Motivating factors for Carbon Disclosure

Hrasky (2011) points out that one way for an organisation to convince stakeholder audiences that their existence and their operations are legitimate is through disclosure. Companies are considered to be legitimate when their actions and activities are perceived or assumed to be "desirable, proper, or appropriate within some socially constructed system of norms, values, beliefs, and, definitions" (Suchmann 1995, 574). If corporate disclosures can persuade stakeholders to believe that the firm's operations are legitimate and the firm is operating as an environmentally responsible citizen, the risk to legitimacy is reduced. Therefore, disclosure is an important means of communicating the alignment of a companies' activities with its society (O'Donovan, 2002). Environmental disclosure is particularly important as a tool used in repairing legitimacy when a company has been implicated in a negative event or predicament. Therefore, high emitters or high polluting companies tend to disclose more information, as a way to "convince stakeholders that their activities are aligned with the values of society, thereby seeking acceptance, or avoidance of penalization" (Ennis, Kottwitz, Lin, and Markusson, 2012).

Further, previous literatures also suggest that social pressure is perceived to be one of the main determinants for the companies to commit themselves to the climate change issues, including reporting and reducing their emissions (Talbot and Boiral, 2015). The widely published data and facts regarding the potential impacts of climate change have led to increased pressure from investors, governments and environmental organizations on companies to disclose and reduce their GHG emissions from their processes, products and services (Jeswani, 2008). In voluntary environment, Kolk, Levy and Pinkse (2008) found that institutional investors could successfully use their power to urge firms to disclose extensive information about their climate change activities in the Carbon Disclosure Project (CDP). The increase in CDP response rate from year to year has proven the success of stakeholders' pressure for disclosure (Okereke, 2007).

Researchers (such as Sukthomya, 2011 and Tata and Prasad, 2015) suggest that disclosure of environmental data could create a positive image of management performance and signal their commitment to society. Besides reflecting commitment, the disclosure can also demonstrate that companies have the resources to create new developments (Sukthomya, 2011). In investigating the drivers that affecting voluntary disclosure in Thailand, Sukthomya (2011, p.220) found that the majority of interviewees agree that high quality disclosure will boost a company's image and build people's confidence in the company; as disclosure is viewed as a long term marketing tool for the company.

Regulation is a powerful tool that can motivate or even force organization to disclose. Criado-Jimenez et al (2008) investigated the effectiveness of the improved environmental regulation in Spain and suggest that the progressive and improved regulation could increase the quantity and the quality of disclosure. With the existence of mandatory requirements, government and other stakeholders can give more pressure to the organisation to improve the disclosure as the choice of disclosure depends on how firms respond to public pressures exerted by various stakeholders and constituencies (Berthelot et al. 2003; Zhou, 2010).

3.0 RESEARCH METHOD

In achieving the objective of the study, a semi structured interview has been carried out with representatives of LSE companies, consultant as well as government agencies. Semi-structured interview include the flexibility in terms of the questions to be asked within the topics and its sequence, the opportunity to get in-depth information on the subject matter, as well as building up a rapport and networking with the participants (Bryman and Bell, 2007). This method could offer a more comfortable environment to both interviewer and interviewee as it is more conversational informal in tone (Longhurst, 2003). This method also allows questioning to be guided in the way that the researcher wants and points can be clarified easily and clearly (Frey and Oishi, 1995).

For this study, 13 companies' representatives were interviewed. These companies are labelled as Company A, B, and so on until M. The targeted participants for the interviews were those who are responsible for and involved in carbon measurement and reporting in an organisation. This could be their CSR manager, Sustainability Director and others. Specific companies are chosen to ensure that there is equal opportunity for different FTSE group companies to participate, as well as ensuring variety representation (Bryman, 2012) from various type of industries.

4.0 FINDING AND DISCUSSIONS

According to Olson (2010), unlike financial reporting, the carbon reporting is less developed and less straightforward. Consequently, it need to be closely addressed to ensure the reporting is effective and accurate. Despite this challenge, companies in the UK LSE has made their carbon disclosures, with or without the mandatory requirements (MCRR). The analysis of the interview reveals that the driving factors that motivate organization to disclose their carbon data can be divided into two main themes; internal and external factors.

4.1 Internal Drivers

Based on the interview data, five internal pushing factors were found, which includes employees' commitment and passion, management commitment, encourage carbon reduction, cost saving and utilization of existing resources.

Companies that can engage employees to their mission and effort could motivate the right action from employees (Marzec, 2007). For Company F, reporting and managing emissions is a good thing that they should do in order to better manage the climate change impact. In addition, as the company is involved in education, their employees' concern and awareness with regard to climate change is high and they are passionate to get involved in managing it together with their organisation. Increasing awareness among employees is a good development in an organization as this would lead to better employee engagement in climate change activities initiated by their organization. As mentioned by their director of corporate responsibility;

> *"A lot of employees are passionate about teaching, education, so they are quite passionate to get involved [in carbon reporting] and it's a noble thing to do – helping making decision based on collected information and manage the impact better." (Company F)*

Disclosing emissions based on scopes or based on sources or business division helps companies to identify the main factors that contribute to their emissions. In addition to that, participants also stated that it is also useful for them to be able to make comparisons between their branches in different countries and further investigate why certain branches' emissions are higher than others. By knowing this, management can design an appropriate strategy for tackling these issues more efficiently. As mentioned by Company's F representative;

> *"By collecting the data, we can reduce our carbon footprint and save our money. It would be the best combination." (Company F)*

From the above statement, it can be understood that the information gathered for the purpose of reporting trigger management to perform action to reduce their emission. This action, finally not just reduce their impact to climate change and environment, but also saving their money. As further commented by Company C representative:

> *"…by saving energy and water, I think we benefit more internally. We saved a couple of hundred million pounds which would have been spent on energy and that money could be invested elsewhere, something which is more worthwhile." (Company C)*

There is no doubt that initial costs for setting up a carbon emissions capturing and measuring system is rather costly. However, once an appropriate system is in place, organization only need to maintain and improve it from time to time if necessary. Therefore, for some companies that already have system in place, reporting year to year emissions is just a continuing process that utilizing the existing resources. As commented by one of the representative, since they have been disclosing it with CDP before, therefore disclosing through annual report is something that is easy to do.

4.2 External Drivers

Compliance with statutory is the top priority for the organizations regarding the reason for disclosure. Despite the soft approach of MCRR, most of the representatives agrees that complying with regulation is not about whether you will be punished or not, but the compliance and non-compliance will have a direct impact to their image and reputation. Through compliance, organization shows that they adhere to the values, norms, or institutional requirements and regulation (Oliver, 1991; Hooghiemstra, 2000; Criado-Jiménez, et al., 2008). As commented by Company C:

> *"..if you are FTSE100, or top 30 company like we are, and you don't comply, clearly it is an area of question from your investors, clients and other stakeholders to what's you are doing. It makes it easier to comply, or better to comply and have no questions raise around you than if you are [seen] not to comply." (Company C)*

The above opinion is backed up other organizations' representatives too. Company G for example consider complying with regulation as at the top of their priority in order to secure their reputation.

> *"It is a UK law and we are the top 10 or top 5 company in FTSE listed companies. We have to comply with the law. It's a mandate in the company. Comply with regulation is rule no. 1." (Company G)*

From the quotations above, there if no doubt that regulation is a primary drivers in the mandatory environment. On the other hand, regulations only is not enough to encourage organizations to disclose. From our preliminary investigation, we have found that non-compliance is exist, despite the mandatory requirement. There are other drivers that stimulate the need to disclose for the organization, especially in the voluntary environment.

The rising awareness of climate change among stakeholders has contributed to institutional pressures, particularly on carbon-intensive industries (Talbot and Boirol, 2015). Nonetherless, organisations will try to fulfil the expectations and demand from their stakeholders in order to survive, as well as minimise the risk of giving bad impressions to the stakeholders. Most of the interviewees admit that their carbon reporting (especially voluntarily) is mostly driven by stakeholders' interest and expectations. Fulfilling stakeholders' expectation is a way for organizations to please their stakeholders and demonstrate their adherence to expected norms. As climate change could impact the world in general and individual companies; stakeholders are interested to know what are the risks and opportunities brought by climate change. In addition, as GHG emissions contribute to climate change, stakeholders also want to know how companies would manage and reduce their emissions and mitigate climate change impact. As commented by Company C;

> *"We had a growing interest from our clients. So other big companies who we work with were interested to know our climate change related performance such as GHG emissions, energy usage and efficiency, emission and reduction activity." Company C.*

The importance of the emissions information to the stakeholders especially investors is also expressed by Caroline Spelman, Secretary of State for the Environment (2013[1]) while commenting on the introduction of MCRR.

> *"Investors are now looking hard at the green credentials of businesses, and the reporting of greenhouse gas emissions will give them vital information as they decide where to invest their money." (Caroline Spelman, Secretary of State for the Environment, 2013)*

Fulfilling stakeholders' expectation is important as it helps boost their reputation in the eyes of their stakeholders. Guarding companies' reputation is vital for the survival of a corporation, as well as in gaining competitive advantages. Thus, reporting non-financial information such as carbon emission would show that the organizations are committed to the government visions and are responsible companies.

> *"We have what we called company's value and transparency. We had public commitment around environmental impact….We use carbon reporting to show to our stakeholders and community how we operate. To show them that we care about stuff. To support our company reputation."(Company G).*

According to Fombrun and Van Riel (1997, p. 10) "reputations constitute subjective collective assessments of the trustworthiness and reliability of firms". Thus they act as a strategic asset that "produce tangible benefits: premium prices for products, lower costs for capital and labour, improved loyalty from employees, greater latitude in decision making, and a cushion of goodwill when crises hit" (Fombrun, 1996, p. 57).

Further, for certain companies that have been disclosing carbon information voluntarily; compliance with regulation is not just as a continuance of the existing efforts; but a way for companies to maintain their good reputation. As commented by Company F:

> *"Part of the reason [for compliance] is because we have been reporting anyway….So far we are doing quite well to show to the investors that we are socially responsible, so we want to defend that." (Company F)*

From the above quotation, it is obvious that compliance with regulation is a means used by companies to maintain and defend their good reputation by demonstrating good morality, behaviour, action and strategy through their story (as suggested by the framework in Chapter 3). Continuous reporting is not only about showing consistency, commitment and fulfilling stakeholder' expectations; but also about wanting to show the improvement achieved by the companies. Company D thus suggest that:

> *"In mandatory reporting, I think everybody that report what to show the best figures. If you didn't show these figures, then obviously it shows that you have no initiatives to reduce your energy. Once you start showing figures you don't want a negative going forward, you want to show the improvement." (Company D)*

This may, at least in part, explain why many companies provided comparative data in the first mandatory year, even though it is not required. Consequently, demonstrations of the companies' ability to improve emissions and achievement of reduction targets form part of the 'achievement story' that could influence stakeholders' perceptions and provoke action within the company. The good reputation in the eyes of the stakeholders is not limited to demonstrating how responsible they are; but also to show their capability in doing things. For example, Company E's Group Property & Environment Director stated that:

> *"Financially people can see what we have invested in capturing the emission data and see the impact of our business in terms of Scope 1 and Scope 2 emissions. Annual report is viewed worldwide so we can get feedback from stakeholders." (Company E)*

The view from Company E was supported by the view from Company C representative, by saying that:

[1] https://www.gov.uk/government/news/leading-businesses-to-disclose-greenhouse-gas-emissions

> *".....the report is increasing our ability to demonstrate our environmental performance to our clients and investors. That's a big one." (Company C)*

The above two quotations evidence that carbon disclosure in annual reports is used as a medium for the companies to demonstrate their goods behaviour, action and strategy in order to influence stakeholders' perception as proposed in the framework in Chapter 3. In addition to that, reporting carbon emission demonstrates that the company is effective in tracking and reporting carbon emissions. The comments from Company E's representative also suggest that reporting carbon information through annual report (especially mandatorily) give the opportunity to the companies to reach more audience geographically, as annual report is accessed and viewed globally. As a result, companies can promote their good (or bad) deeds and get feedback from wider scopes of stakeholders.

Last but not least, carbon emissions disclosure may form part of requirement for tender or loan. As commented by Company E representative:

> *"Another driver for us is investments. Some investments grant insists on environmental performance. For the FTSE companies, they want to see whether we manage and report our GHG."*

The requirement for the environmental performance that includes carbon emissions is not only considered in investment grant decision, but in bank loan decisions and other business opportunities such as government tender. The Agency W's senior auditor commented that:

> *"Government tender may require companies to include sustainability segment. They want the job to be done sustainably: low emissions, good source, no deforestation, etc. If the company does not have that, they won't be in. It is not just for the government contract; but also for some of the loan contract too such as the loan for public transport." (Senior Auditor, Agency W)*

As for Company E, since their operation involves public transport, thus reporting and showing a good performance in this area is vital especially in securing the funds for their company.

5.0 CONCLUSION

Regulation, stakeholders' interest and expectation, reputation and internal benefits are among the important drivers of carbon reporting. Even though there is a mixed of internal and external drivers, image and reputation appear to be the key drivers of carbon disclosure, regardless of whether the regimen is voluntary or mandatory. However, as emphasised by Company M; "..the reason we do it and have always done it is around management reputation and innovation"; reputation is found as a top priority that encapsulates other motivations.

Top management may have a noble intention of reducing the effect of their activities to the environment, especially in term of carbon emission. By reporting it, it helps organization to have a systematic of the emission record, thus helping the organization to keep track of their performance. Whether the organization purely want to reduce their emission from time to time or not, most of the organization wanted to report the reduction. If there is no reduction, if might reflects that they haven't done anything to reduce it. On the other hand, the increment may be caused by the expansion of the business. Why show reduction? Again, it is about managing the stakeholders' impressions towards the organization, especially the management team. Killing two birds with a stone; reducing emissions and show it in their report will help them reduce their costs, probably through energy reduction and at the same time portrays a good image of the organization and the effectiveness of management.

In mandatory environment, even though making disclosure is about compliance with regulation and avoiding any punishment; it is also about protecting their image and reputation. This is more applicable to the organizations which are considered as leading organizations in their industry. Their business is benchmarked by other companies in the industry; therefore they always want to show that they are ahead every time. This includes in complying with a new regulation like MCRR. Further, as top list companies (such as FTSE 100), non-disclosure of non-compliance will rise complains from stakeholders even though the existence of disclosure may not give any impact to their decisions. That is why complying with regulation become top priority to most of the organizations being interviewed.

Lastly, carbon disclosure is also important in order to impress the government or financial provider. Having a disclosure giving a good perception of companies' transparency and commitment. On the other hand, having the disclosure itself, regardless of whether some improvement have been made may form part of requirement for loan or tender applications. Nonetheless, showing some reductions is a bonus that might somehow or rather effect the application result.

In a nutshell, it can be conclude that image and reputation is the top priority that influence companies' decision to disclose. If the companies are able to fulfill their stakeholders' expectation, be transparent and show commitment, the stakeholders' confidence and trust on the management team will be stronger. Besides, their competitors will also look up at them and benchmark them for their own reporting.

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