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THE ROLE OF MULTINATIONAL COMPANIES FOR WORLD SUSTAINABLE DEVELOPMENT AGENDA

MUHAMMAD IZZUDDIN SYAKIR ISHAK[1,3], NUR FARHANA ASYIKEEN ISHAK[2], MOHD SAYUTI HASSAN[3], AZLAN AMRAN[2], MOHD HAFIIDZ JAAFAR[1] AND MOHAMAD SHAHARUDIN SAMSURIJAN[4]*

[1]School of Industrial Technology, [2]Graduate School of Business, [3]Center of Global Sustainability Studies, [4]School of Social Sciences, Universiti Sains Malaysia, Malaysia.

**Corresponding author: msdin@usm.my*

Abstract: Multinational Company (MNC) is a key stakeholder to the global economy, hence, imposes significant implications to sustainable development. Today, besides economy, environment and society also appeared as the main components in sustainability agenda of MNCs. However, in reality, wearisome updates of increasing environmental degradation and endless poverty make up the view marking the end of Millennium Development Goal (MDG). The samples of 34 MNCs were selected randomly from Top 100 Global Companies in 2013 based on market capitalization. It comprises seven categories of industry. The MNCs sustainability report was analysed systematically using summative content analysis approach Social Accounting Matric (SAM) for an effective analysis of sustainability keywords. Results showed that the components of environment, social and economy are balanced (20-25%) for all industries. For Sustainable Development pillars, Cross-sectoral issues and sectoral challenges, the economy and environment appear as the most concern sustainability components, followed by production and consumption and energy components, respectively, suggesting that the cost and energy savings for production and consumption are of importance to MNC's sustainability agenda as the earth's ecosystems are nearing critical tipping points of depletion. As well, the results demonstrate a slow but steady progress of the sustainable development agenda despite commitments of MNCs.

Keywords: Multinational company, sustainability, society, environmental, economic.

Introduction

In a year 1962 was a turning point to sustainability. Rachel Carson through her remarkable work, Silent Spring, had reported the catastrophic levels of agricultural pesticides in environment, causing harm to animal species as well as to human health (IISD, 2012). Her work inspired environmentalism worldwide. Ten years later (1971), Maurice Strong, a Secretary General of UN conference on Human Environment commissioned a report 'Only One Earth'. The document was for the first UN meeting, 1972 on environment in Stockholm (UN Millennium Project [UNMP], 2005), reporting on important findings of 152 leading experts from 58 countries. The results stressed on anthropogenic impact on biosphere. This was a wake-up call to all stakeholders for them to create a common future (IISD, 2012).

The effort for sustainable development progressed to Earth Summit, 1992 in Rio de Janeiro with significant outcomes of Agenda 21, Convention on Biological Diversity, the Framework Convention on Climate Change, Rio Declaration and non-binding Forest Principles (IISD, 2012). A decade later, the world moved assertively to address challenges of development in an interdependent world (UN News Center, 2002). The agenda was tabled at World Summit on Sustainable Development (WSSD), 2002, Johannesburg under the leadership of Kofi Annan.

Nonetheless, our world is still in a "gloom" for over the past five decades (1960-2015). Ongoing deforestation, rising air and water pollution, explosion of zoonotic and vector-borne diseases (UNMP, 2005), continuous increase of global CO_2, over exploitation

of marine fish stock and species extinction (Millennium Development Goal (MDG) Report, 2013) are several examples that demonstrated an unpleasant reality; we are still far from sustainable development despite numerous significant commitments. Moreover, impact of land degradation globally has resulted in poverty and hunger, thus, forced to rural-urban migration (UNMP, 2005) and consequently, today about 863 million people of developing world reside in urban slums (MDG, 2013).

Such detrimental state necessitates concerted effort from all stakeholders (i.e. corporate, government, NGO, higher education institutions etc.), hence, balances the sustainability components of Environment, Society and Economy. Sustainability agenda required a hefty monetary commitment, indeed and for this reason participation of Multinational Companies (MNC) is of importance. This paper will discuss the global MNC commitments, effort, concerns and actions towards sustainable development. An overview of current progress of MNCs' sustainability agenda will provides some insight into current challenges towards sustainable development, thus, improve their corporate strategic planning for sustainable development in future.

As one of the key stakeholders in environment, MNCs play important roles in implementing sustainable development. Nevertheless, only little progress had been achieved so far since the Rio de Jenero (1992) until the Johannesberg (2002) summits (Esty & Winston, 2009), yet, many companies have started to espouse environmental policies in order to stay competitive in their business.

This reflects their awareness on environment which is critical to current economic system in natural capital term, thus, essential to MNCs' business strategy in facing the reality of environmental pollution and natural resources management. Negligence to those factors will therefore easily spoil the company's reputations (Esty & Winston, 2009).

MNCs' are expected to incorporate environmental concerns into strategic, operational and governance processes of corporations (Barkemayer *et al.,* 2014). A proper environmental management program may be developed to lay the foundation in implementing "the greening of business" (Kolk, 2016). From this expectation, rise various concepts (green business, green policies etc.) that interpret it into corporate responsibilities in protecting the environment. For example, it is found that MNCs commitment towards their green policies will produce positive and significant impact in terms of their green/environmental reputation (Abdelzaher *et al.,* 2016).

However, MDG Report (2013) showed grim facts of current world status today. Data collected over two decades has demonstrated that the growth in global emissions is accelerating, rising 10 per cent from 1990 to 2000 and 33 per cent from 2000 to 2010 and now accumulatively, increases by more than 46 per cent since 1990, thus act as amplifier to global warming.

As well, it was reported that for almost one third of marine fish stocks were over-exploited and many species in this planet are at risk of extinction despite more numbers of protected areas. Forests also demonstrated an alarming rate of disappearing despite establishment of sustainable forest policies. South Africa and America appeared as the largest net deforestation with 3.4 million and 3.6 million hectares per annum, respectively. Note that the facts were based on deforestation rate from 2005 to 2010. One of the underlying factors to deforestation is the land conversion (forests to agriculture), driven by world's growing population (MDG, 2013). More people, more food, hence it is evidence that supply and demand in global business activities posed tremendous impact on earth's ecosystems, resulting in environmental quality degradation and poverty.

For this reason, more integrated approaches between agriculture and forest sectors are needed to make real progress in reversing the loss of natural resources. Essentially, the integrated approach is important for the implementation of international commitments related to climate change mitigation, biodiversity conservation and sustainable land management. Considering

the commitments, how critical the role played by MNCs for the world sustainable agenda?

Research Objectives

This research aims to learn the extent of MNC's commitment towards sustainable development by analyzing their sustainability report. Sustainable development is built from the integration of three pillars, comprising the environment, economy and society components (World Commission on Environment and Development (WCED), 1987). Later in 2002, the WEHAB components (Water, Energy, Health, Agriculture and Biodiversity) were introduced as complementary to the three pillars (Environment, Economy and Social), essentially to address the global current issues, climate change, production-consumption and population-poverty (WSSD, 2002). The WEHAB initiative, therefore, is a focal point of MNCs' sustainability strategic planning, helps in addressing the current interest effectively, climate change, production-consumption and population-poverty ("plus 3").

The objectives of study are simplified as follow:

1. to study MNC's most area of concern in three pillars of sustainability terms.
2. to assess the extent of MNCs sustainability commitments in cross-sectoral challenges (WEHAB).
3. to evaluate sustainability progress of MNCs in cross-sectoral issues of "plus 3".
4. to examine their effort in education for sustainable development terms.

Theoretically, global sustainability is achievable provided that all organizations commit towards sustainable development (Jegatesan, 2013). This study provides an overview of current progress of MNCs commitment towards sustainability. The progress provides some insight on current challenges towards sustainable development, hence, such information may help related stakeholders to improve their sustainability strategic planning.

Literature Review

Companies are urged to adopt sustainable development practices into their business strategy. Sustainable development practices will not only benefit the company as it could prove to be an advantage to environment, economy and society. Companies that adopt sustainability practices are more resilient in the market as well as having more competitive edges than companies with ordinary practices. According to the Kolk (2016), Abdelzaher (2016) and Newburry (2016), building a corporate reputation for environmental responsibility has become an important target for many multinational corporations (MNCs) today. They also argue that green reputation is a function of both policy and practice. The 'sustainability' term had been popularized in 1987, the year where Our Common Future, a report of UN-sponsored World Commission on Environment Development (WCED) was published (IISD, 2012). Since then, the terms 'sustainability' and 'sustainable development' have been widely used and accepted by all organizations as to demonstrate their commitment in sustaining the environment, economy and society.

Since 1990s, sustainability has become a hot topic among researchers and lots of studies regarding sustainability can be found. Most of the sustainability studies comprising in understanding the concept of sustainability, the differences of sustainability terms, factors that determine sustainability practices, the advantage of being sustainable business, sustainability performance, consumer and leaders perception on sustainability. In the other hand, there are also researches being done in identifying sustainability indicators to measure sustainability performance, developing sustainability performance approaches and developing tools to access sustainability commitment. Hence, this study is about accessing the extent of sustainability commitment of MNCs by utilizing Sustainability Assessment Method (SAM) that has been developed by Centre for Global Sustainability Studies (CGSS), Universiti Sains Malaysia.

Defining Sustainability

A variety of sustainability definitions exist in the relevant literature, often using differing terminology and sometimes overlapping in their meanings. Generally sustainability in the basic terminology means the ability to sustain (i.e. to continue or to maintain) something into the future. Hence, sustainability refers to the capacity of something (a thing, a quality, an activity, a system, etc) in continuing to function into the future (Velasquez, 2014). In other word, sustainability is meeting human's need without harming future generation (Cavusgil *et. al.*, 2014).

Recent studies have mainly agreed on the Triple Bottom Line (TBL) model developed by Elkington (1998) which incorporates the economic, environmental and social dimensions of sustainability and highlights the interdependencies between them. However, different definitions of sustainability still exist, showing the somewhat complex characteristics of this concept. Table 1 presents a selection of these diverse definitions. These different definitions illustrate some of the contrasting understandings of sustainability found in the literature. Despite its acclaimed vagueness and ambiguity, the WCED definition of sustainable development has been highly instrumental in

Table 1: A sample of definitions and interpretations of sustainability and sustainable development

Authors	Sustainability Definition
WCED (1987, p.8)	Development that meets the needs of the present without compromising the ability of future generations to meet their own needs is what sustainability means.
Costanza & Patten (1995)	The basic idea of sustainability is quite straightforward as a sustainable system is the one which survives or persists.
United Nations Environment Programme Finance Initiative (1997)	Sustainable development depends upon a positive interaction between economic and social development and environmental protection in order to balance the interests of this and future generations.
Parris & Kates (2003)	A minimal definition of sustainable development [...] includes meeting human needs in which reduces hunger and poverty while preserving the life support systems of the planet.
Ehrenfeld (2005)	Define sustainability as the possibility that all forms of life will flourish forever. For human beings, flourishing comprises not only the survival and maintenance of the species but it also a sense of dignity and authenticity. [...] Ultimately, sustainability requires responsible and ethical choices everywhere in daily life.
United Nations General Assembly (2005)	Sustainable development in its economic, social and environmental aspects constitutes a key element of the overarching framework of United Nations activities.
Lozano (2008)	In order for us to achieve societal sustainability we must use a holistic, continuous and interrelated phenomenon amongst economic, environmental, social aspects [...] and that each of our decisions has implications for all of the today's aspect and in the future.
Velasquez (2014)	Sustainability refers to the capacity of something (a thing, a quality, an activity, a system, etc.) has to continue to function into the future.
Cavusgil *et al.,* 2014	Sustainability is meeting human's need without harming future generation.

developing a "global view" with respect to our planet's future (Mebratu, 1998).

Corporate Sustainability

Sustainability in a corporate context is essential recognizing that a corporation's long term interest are intellectually and financial consistent with resource, efficiency, proactive health and safety practices and responsible leadership (Docekalova & Kocmanova, 2015). Corporate sustainability is a business approach that create long term consumer and employee value by creating a "green" strategy aimed toward the natural environment and taking into consideration every demension of how a bussiness operates in the social, culture and economic. It also formulates strategies to build a company that fosters longevity through transperency and proper employee development (Chabowski *et al.*, 2011).

Sustainable development is based on triple bottom line which is balance of environment, social and economic pillars (Elkington, 1998). In such case we refer to environment, social and economic factor of corporate sustainability. Companies are trying to achieve long term benefit by integrating activities associated with sustainability into their strategies. In general, companies integrate sustainability practice because they are obliged to do it or because they want to do it (Marie & Alena, 2015). Many indicators have been developed in the past twenty years which measure the corporate performance in the context of its sustainability and accountability. Measuring corporate sustainability means measuring the extend in which companies incorporate economic, social and environment factors into their activities and ultimately measuring the impact of their activities on their environment (Artiach *et al.,* 2010).

Triple Bottom Line (TBL)

The TBL model that proposed by Elkington (1998) is highlighting the interdependency of three pillars, namely environmental, economic and social sustainability. Hence, it is important in this study to have better understanding about these three pillars.

Environmental Sustainability

Although ES is needed by humans and originated because of social concerns, ES itself seeks to improve human welfare by protecting NC. As contrasted with economic capital, NC consists of water, land, air, minerals and ecosystem services are being converted for manufacturing reason or even as economic capital. Environment also consists of the sources of raw materials used for human needs and simultaneously ensuring that sink capacities recycling human wastes are not being exceeded in order to prevent harm to humans.

Humanity must learn to live within the limitations of the biophysical environment. ES means NC must be maintained, both as a provider of inputs (sources) and as a sink for wastes. It means there is a need in holding the scale of the human economic subsystem (population and consumption, at any given level of technology) to within the biophysical limits of the overall ecosystem on which it depends. ES can be achieved through sustainable consumption by a stable population.

On the sink side, this translates into holding waste emissions within the assimilative capacity of the environment without impairing it. On the source side, harvesting rates of renewable entities must be kept within regeneration rates. Technology can promote or demote ES. Non-renewable entities cannot be made sustainable, but quasi-ES can be applied for non-renewable entities by holding their depletion rates equal to the rate at which renewable substitutes are created. There are no substitutes for most environmental services and there is small potential of irreversibility if they are damaged.

Economic Sustainability

Economic capital is an important element that need to be maintained in achieving economic sustainability. The widely accepted definition of economic sustainability is maintenance of capital or keeping the capital intact. Thus

Hicks's definition of income–the amount one can consume during a period and still be as well off at the end of the period–define economic sustainability as it devolves on consuming value-added (interest) rather than capital.

Economic and manufactured capital can be considered as substitutable. There is much overcapitalization of manufactured capital which can be explained as too many fishing boats and sawmills chasing declining fish stocks and forests. Historically, economics has rarely been concerned with natural capital (e.g. intact forests, healthy air). The traditional economic criteria of allocation and efficiency must now be added as much as a third of the scale (Daly, 1992). The scale criterion would constrain throughput growth–the flow of material and energy (NC) from environmental sources to sinks.

Economics values things in money terms and has major problems in assessing NC, intangible, intergenerational and especially common access resources such as air. As people and irreversible elements are at stake, economic policy needs to use anticipation and the precautionary principle routinely while erring on the side of caution in the face of uncertainty and risk.

Various strategies are being applied for employing existing resources optimally so that a responsible and beneficial balance can be achieved over the longer term. Within a business context, economic sustainability involving utilization of assorted assets of a company efficiently in accomplishing the continuity in functioning profitability.

Social Sustainability

The main idea of social sustainability is sustaining social capital. Social capital is investments and services that create the basic framework for society. It lowers the cost of working together and facilitates cooperation: trust lowers transaction costs. The only way of accomplishing this is through systematic community participation and strong civil society including government. Cohesion of community for mutual benefit, connectedness between groups of people, reciprocity, tolerance, compassion, patience, forbearance, fellowship, love, commonly accepted standards of honesty, discipline and ethics (Goodland, 2002). Social sustainability can be promoted via commonly shared rules, laws and information.

Shared values constitute the part of social capital least subject to rigorous measurement but essential for social sustainability. Social capital is undercapitalized leading to high levels of violence and mistrust. Social (sometimes called moral) capital requires maintenance and replenishment by shared values and equal rights in a community, religious and cultural interactions. If these matters are not being taken into consideration, social capital will depreciate along with physical capital. The creation and maintenance of social capital as needed for social sustainability is not being recognized sufficiently. Western-style capitalism can weaken social capital because it concentrated more on promoting competition and individualism over cooperation and community. Violence is a massive impact that incurred in some societies because of lack of investment in social capital. Violence and social breakdown can be the most severe constraint to sustainability. The ability of a community to develop processes and structures which not only meet the needs of its current members but also support the ability of future generations to maintain a healthy community is essential in social sustainability.

Based on these three pillars of sustainability, MNCs may be evaluated on their commitment and performances on sustainable development agenda. Increasing attention has been given towards on the concept of sustainable development including MNCs and has been applied in their CSR tools (Barkemayer *et al.,* 2014). Looking into MNCs performances towards sustainable development agenda, stakeholder engagement is a primary mediator between the stakeholders and the outcomes regardless of the type of industries involved (Rhodes *et al.,* 2014). It was also stated that research and development and internalization

are two organizational attributes required to develop and maintain sustainability in over long-term (Chakrabarty & Wang 2012). In order to understand the performances various MNCs in multiple natures of industries will require further investigation.

WEHAB Initiatives

To further understand the concept of sustainability, Jegatesan & Khosy (2013) have developed a conceptual framework (Figure 1) which is the extension from the concept of Triple Bottom Line and adaptation of WEHAB initiative as proposed by Kofi Annan at the World Summit on Sustainable Development (WSSD) held in Johannesburg in 2002. WEHAB is a key framework that can be used to organize the evaluation of SD and climate change linkage with various cultural issues and values as cross-cutting sectorial issues (Intergovernmental Panel on Climate Change (IPCC), 2007).

Figure 1 shows that sustainability locates at the centre of intersection within environment, economy and society. It can be understood that to achieve sustainability, organizations should integrate those three components of sustainability. The main question is how are the components can be integrated. WEHAB initiative is one of the approaches that have been proposed to resolve this issue. According to Jegatesan and Khosy (2013), WEHAB agenda encompasses the fundamental areas of importance to human and environmental well-being i.e. Water, Energy, Health, Agriculture and Biodiversity, which must all be addressed if global sustainability is to be attained. Hence, the sustainability only can be achieved if organizations especially MNCs integrating WEHAB initiative as well as addressing the cross sectoral issues into their sustainability agenda.

Cross-sectoral Issues

In addition to the adoption of the WEHAB areas, Jegatesan and Khosy (2013) stated that it is vital for organizations to consider the three cross-sectoral issues which are "climate change/disaster risk management", "population/

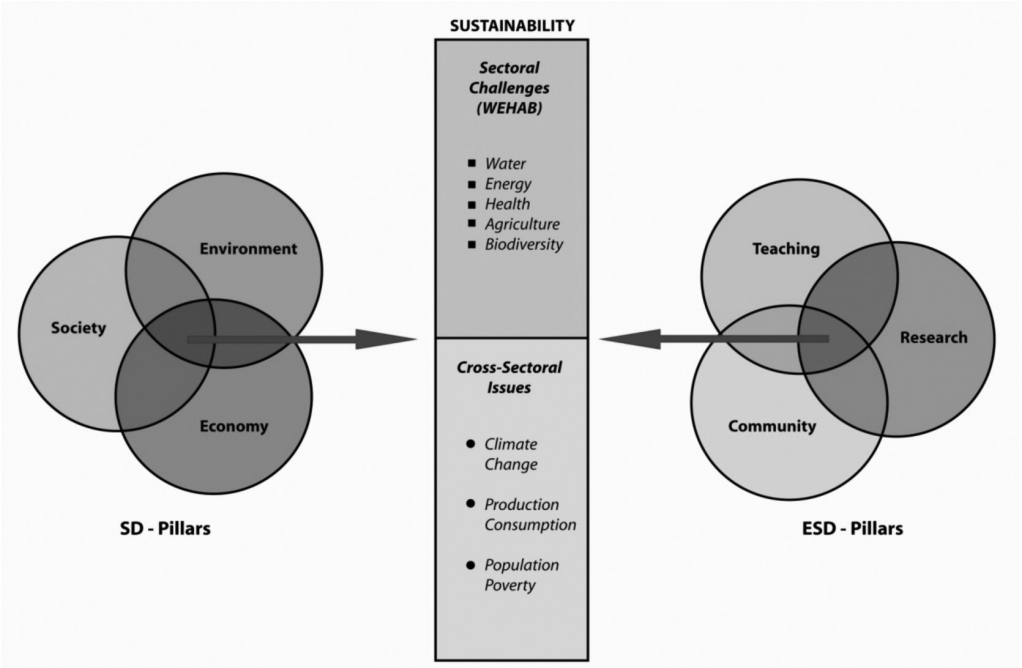

Figure 1: An integrated approach to mainstreaming sustainability at USM (Jegatesan & Khosy, 2013)

poverty" and "production/consumption" into their sustainability agenda. If these issues are not being taken into consideration, it would definitely prove that organizations are incapable in addressing the world's sustainability needs and issues effectively (Jegatesan & Khosy, 2013). The interlinking nature of WEHAB areas and the accompanying cross-sectoral issues are shown in Appendix 1.

Education for Sustainable Development (ESD)

Education for Sustainable Development (ESD) allows every human being to acquire the knowledge, skills, attitudes and values necessary to shape a sustainable future. According to United Nations Educational, Scientific and Cultural Organization (UNESCO), ESD means including key sustainable development issues into teaching and learning for example climate change, disaster risk reduction, biodiversity, poverty reduction and sustainable consumption. It also requires participatory teaching and learning methods that motivate and empower learners to change their behaviour and take action for sustainable development. Education for Sustainable Development consequently promotes competencies such as critical thinking, forecasting future scenarios and decision making in a collaborative way. Education for Sustainable Development requires far-reaching changes in the way of education is currently being practiced. Education is one of the key aspects in developing understanding towards sustainable development among human capital.

It is important to have an extensive understanding in sustainability before performing sustainability assessment. This study adopted sustainability model that has been used in Universiti Sains Malaysia as guideline for USM in achieving its vision "Transforming Higher Education for a Sustainable Tomorrow". The model that consists of the component of sustainability, WEHAB, education for sustainable development and cross sectoral issues emphasizes on the integration of all the components in order to attain global sustainability.

Methodology

Research method used in this study and the research design employed in this study is being explained. It covers the document analysis and the summative content analysis methods that have been applied. This study also introduces a new tool of content analysis, known as Sustainability Assessment Method (SAM) which is more simple, quick and robust.

Research Method

The main objective of this research is to study the extent of the MNC's commitment of sustainability practices and the trend of sustainability driven from the perspective of WEHAB initiative which can be analyzed from the company's sustainability report. Hence, this study is to be a descriptive research which is under the component of qualitative research. According to Sari (2008), the descriptive research is concerned with conditions, practices, structures, differences or relationships that exist, opinions held processes that are going on or trends that are evident.

One of the methods that are widely used in the descriptive research is documentary method. It refers to the analysis of documents that contain information about the phenomenon we wish to study (Bailey, 1994). It also can be described as a research method for the objective, systematic and quantitative description of noticeable content of communications (Sari, 2008). Meanwhile Payne and Payne (2004) describe the documentary method as the techniques used to categorize, investigate, interpret and identify the limitations of physical sources, most commonly written documents whether in the private or public domain. This method enables the researcher to include large amounts of textual information and systematically identifying specified characteristics of messages (Sari, 2008). The textual information in the documentary method can be in any written documents such as books, book chapters, essays, interviews, discussions, newspaper headlines and articles, historical documents, speeches, conversations, advertising, theater,

informal conversation or really any occurrence of communicative language (Sari, 2008).

In this study, the information about the phenomenon that will be focused on is the sustainability practices among MNCs which can be obtained from their sustainability report. In order to pursue a documentary method, Scott (1990) justified that it is a researcher's responsibility to ensure the documents authenticity, credibility, representativeness and meaning. These are the quality control criteria for handling documentary sources that formulated by Scott (1990). Based on criteria listed by Scott, the sustainability report of a company is the reliable and trustworthy document to be examined in the context of this research. Sustainability report is a non-financial report that conveys sustainability related information in a way that is comparable with financial reporting.

Research Design

A systematic approach is required for the content analysis of the sustainability reports. Thus, this study employs summative content analysis method by utilizing Sustainability Assessment Method (SAM) as a tool of content analysis. The results obtained from the summative content analysis will facilitate the descriptive analysis on the extent of sustainability commitment of MNC's sustainability report according to the WEHAB initiative.

Summative Content Analysis

In a summative approach to qualitative content analysis, data analysis begins with searches for occurrences of the identified words by hand or by computer. Word frequency counts for each identified term are calculated with source or speaker also identified. Counting is used to identify patterns in the data and to contextualize the codes (Morgan, 1993). This method works on the principle that the more important a subject is considered to be, it will be mentioned more frequently in words, phrases, themes or images. (Crowther & Lancaster, 2009). Hence, it will allow for interpretation of the context associated with the use of the word or phrase. Researchers try to explore word usage or discover the range of meanings that a word can have in normal use. This approach seems quantitative in the early stages, but its goal is to explore the usage of the words/indicators in an inductive manner (Hsieh & Shannon, 2005).

A summative approach to qualitative content analysis has certain advantages. It is an unobtrusive and nonreactive way to study the phenomenon of interest (Babbie, 1992). It can provide basic insights into how words are actually used. However, the findings from this approach are limited by their inattention to the broader meanings present in the data. As evidence of trustworthiness, this type of study relies on credibility. A mechanism to demonstrate credibility or internal consistency is to show that the textual evidence is consistent with the interpretation (Weber, 1990). Since content analysis method has been widely used in research studies for categorizing, associating and interpreting the content of written, recorded, or published communications (Cooper & Schindler, 2006), this approach also seems suitable for analyzing the extent of sustainability commitment of MNCs and the most focused area of their sustainability commitment in particular. Moreover Jose and Lee (2007) stated that content analysis method has been widely used in environmental responsibility researches to analyze published information.

Sustainability Assessment Method (SAM)

As discussed earlier, a summative content analysis will start on counting sustainability words. Therefore, the researcher needs to identify which words or themes do interpret sustainability. However, this step was done by SAM. Sustainability Assessment Method (SAM) is a tool to assess the sustainability content of courses and projects. It has been developed by Centre for Global Sustainability Studies (CGSS) of Universiti Sains Malaysia (USM) to monitor sustainability throughout USM for academic purposes. SAM already being used to assess the sustainability content of more than thousands documents such as

USM courses and subjects, research projects and community initiatives (Khosy *et al.,* 2013). Furthermore, SAM also had been used in a project that had been internationally recognized by the United Nations University Regional Centre of Excellence for its contribution in community awareness and capacity building initiatives (Koshy *et al.*, 2013). Therefore, SAM is an established application that can be used to analyze sustainability content in the sustainability report of MNCs in this study.

Unit of Analysis

When using a content analysis method to assess written documents, researchers must first decide at what level they plan to sample and what units of analysis will be counted. Sampling may occur at any or all the following levels: words, phrases, sentences, paragraphs, sections, chapters, books, writers, ideological stance, subject topic or similar elements relevant to the content.

Today, most of the MNCs are really serious in implementing the sustainable development as their business strategies. Every year they will provide a report of their sustainability practices as a medium of communication to the stakeholders so that interested parties are aware about their responsible business effort. Therefore, to study the sustainable development practices among MNCs, the best approaches are by studying their sustainability reports as sample for this study. It is an efficient approach as generally an organization will take full responsibility in whatever being reported in the sustainability report.

According to Berelson (1952), Berg (1983), Merton (1968) and Selltiz *et al.* (1959), in content analysis method, there are seven major elements in written messages that can be counted which are words or terms, themes, characters, paragraphs, items, concepts and semantic. Thus, the units of analysis in this study are words or terms that represent the sustainability practices of the MNCs. To study the sustainability practices in the MNCs, SAM will analyze the MNC's sustainability reports to know the overall coverage of sustainability themes. SAM will analyze the information inside the sustainability reports by using 24 key sustainability criteria aligned to the content of the internationally agreed documentation listed in the Appendix 3 (Khosy *et al.,* 2013).

Sampling Procedure

The population samples in this study are all the MNCs listed in the Top 100 Global Companies by market capitalization for the year of 2013 (updated till June 2013) provided by Pricewater House & Cooper (PwC). It is believed that, the large MNCs are expected to disclose its sustainability practices for their stakeholders in a good reporting manner. From the observation, most of MNCs have the obligation to provide their standalone sustainability report besides the annual report for their stakeholders. Therefore, only MNC who has provided the sustainability report for the year 2013 were selected to be in the research sample. The sustainability reports in this study were accessed from the website of selected studied MNCs.

The MNCs listed in the Top 100 Global Companies consisted of nine industries namely: technology, oil and gas, financials, health care, consumer goods, consumer services, industrials, basic materials and telecommunication. However, this study only focused on seven industries where basic materials and telecommunication were excluded from the list due to research limitation. Therefore only 89 companies have been chosen as the study population. Out of 89 companies, only 34 companies were randomly selected by using Excel Random Sampling Calculation as shown in the Appendix 5. The breakdown of the total selected MNCs by industries are showed in Table 2.

From the number of sample selection, it clearly showed that the total number of MNCs from consumer goods industry is the highest compare to other industries. This is because consumer goods industry is the most dominant industry from the list compared to others after financial and oil & gas industries. Other than that, this study focuses on multiple industries because it can be essential in exploring the

Table 2: Number of sample selection by industries

No.	Industry	Total Selected MNCs
1	Consumer Goods	10
2	Consumer Services	4
3	Financial	4
4	Health Care	4
5	Industrial	4
6	Oil and Gas	4
7	Technology	4
	Total	**34**

trend and the diversification or the similarity of sustainability practices of MNCs from multiple industries in order to enlighten the concept of sustainable.

Data Collection

The data in this study obtained from sustainability reports of the MNCs that are being studied. All the 34 sustainability reports were downloaded from the official website of the MNCs. The reports were in PDF format. Since SAM only compatible with the small size file (less than 400kb), then the PDF file needed to be converted into text file and converted into word document. A small editing had been done to the document file where only appropriate information was selected. All the appendices were not being considered in the analysis and had been deleted.

Data Analysis

Sekaran (2009) stated data analysis is critical to generate objectives specifically in order to have initial ideas on frequency, dispersion and to test whether the hypothesis are validated. Since this study did not have hypothesis testing, the application of Microsoft Excel was appropriate to do the statistical analysis including descriptive analysis for the result obtained from SAM analysis. All data from 34 samples were grouped accordingly to the industries and the descriptive analysis was also run respectively by the type of industries.

Results and Analysis

Descriptive analysis of the results of the sustainability reports analysis by SAM have been completed with regards to measure the extent of sustainable development commitment in the MNCs and the trend of sustainable development driven focused area.

Descriptive Statistics on MNC's Sustainability Report Analysis

The MNC's Sustainability Report analysis is meant to measure the extent of sustainable development practices of MNCs for the year 2013 from the perspective of WEHAB initiative. The list of sample selected according to the industries is shown in the Table 3 and the sample distribution is shown in Table 4. 34 samples have been chosen from the list of Global Top 100 Companies by Market Capitalization from seven industries.

The frequency distribution of MNCs in accordance to the industries has been summarized in Table 4. It shows that 29 percent of the samples are from Consumer Goods (CG), which consists of MNCs that involve in food product, non-food product, automotive, home appliances, soft drinks, alcohol and tobacco businesses. The number of MNCs from CG is more than other industries due to the variety of businesses concept that may lead to different focused of sustainability practices. Furthermore, the number of MNCs in this area is more than other industries except for Financial and Oil & Gas. The rest of the samples are respectively 12 percent from Consumer Services (CS), which consist of retail, entertainment and home living business, Financial (FIN), which consist of bank, Health Care (HC), which consist of

Table 3: Selected Samples

No.	Industry	Total Selected Company	Total Company in the list of Global Top 100 Companies	Percentage (%)
1	Consumer Goods	10	17	59
2	Consumer Services	4	7	57
3	Financial	4	24	17
4	Health Care	4	10	40
5	Industrial	4	5	80
6	Oil and Gas	4	16	25
7	Technology	4	10	40
	Total	34	89	38

Table 4: Sample Distribution

No.	Industry	Code	Frequency (n)	Percentage (%)
1	Consumer Goods	CG	10	29
2	Consumer Services	CS	4	12
3	Financial	FIN	4	12
4	Health Care	HC	4	12
5	Industrial	IND	4	12
6	Oil and Gas	OG	4	12
7	Technology	TECH	4	12
	Total		34	100

pharmaceutical business, Industrial (IND), which consist of engineering and manufacturing businesses, Oil and Gas (OG) and Technology (TECH), which consist of computer, software, hardware and semi-conductor chip business.

Descriptive Statistic on Sustainability and Sustainable Development Pillar

SAM has been utilized to analyze sustainability reports from selected samples through word count of content analysis. The result of sustainability report analysis by SAM is presented in Appendix 6. Referring to the SAM output as shown in the Figure 2, the total average of sustainability level for each industries are between 13 to 16 percent which can be considered as low according to Khosy *et al.,* (2013). These outcomes indicated that there are still a lot of room for improvement which needed to be resolved by MNCs to contribute to global sustainability by achieving the score of more than 50%. CS achieved the lowest score at 12.5%, followed by IND at 13%, CG at 13.3% and HC 13.6%. On the other hand, OG and TECH industries obtained the highest total average of sustainability at 15% and 15.5% respectively.

However, when discussing about the total average score of sustainability in terms of sustainable development pillars which are being categorized as Environment (ENV), Economy (ECO) and Society (SOC), the results illustrated that each industries lean towards certain sustainable development pillars. As shown in Figure 3, the scores for the environmental sustainability were between 18% and 27%. HC industry recorded the lowest score at 18.4%, followed by CG at 23.9%, CS at 24.5%, OG at 25.3%, FIN at 25.5% and TECH at 27.1%. From the result, the study found that Technology was environmental sustainability driven.

In the aspect of economic sustainability as shown in the Figure 4, the scores obtained were between 18% and 31%. CS has achieved the lowest score at 18.7%, followed by CG at

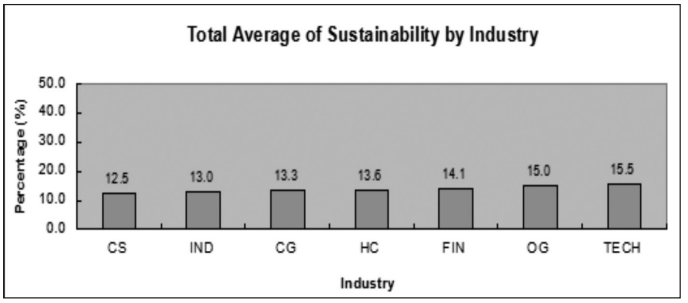

Figure 2: Total average of sustainability score by industry

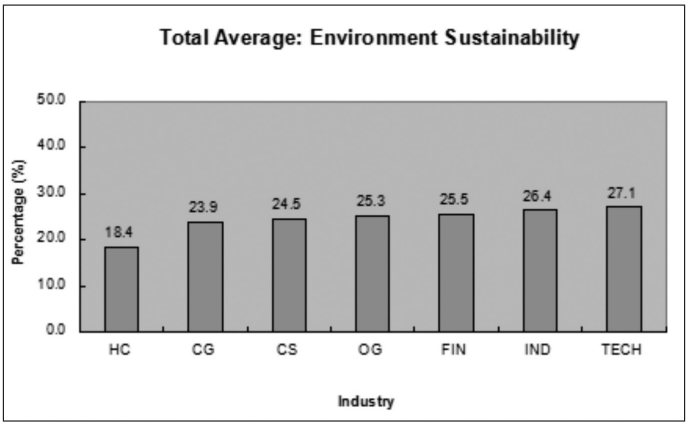

Figure 3: Total average of environmental sustainability score according to industry

23.1%, IND (23.4%), HC (25.3%), OG (26%), TECH (26.8%) and the highest score was FIN at 30.8%. From the result, the study found that financial industry has a tendency to lean towards economic sustainability.

For the social sustainability as shown in the Figure 5, the scores were between 17% and 23%. CG has obtained the lowest score at 17%, followed by OG (19.2%), FIN and CS (19.4%), TECH (19.9%), IND (21.8%) and

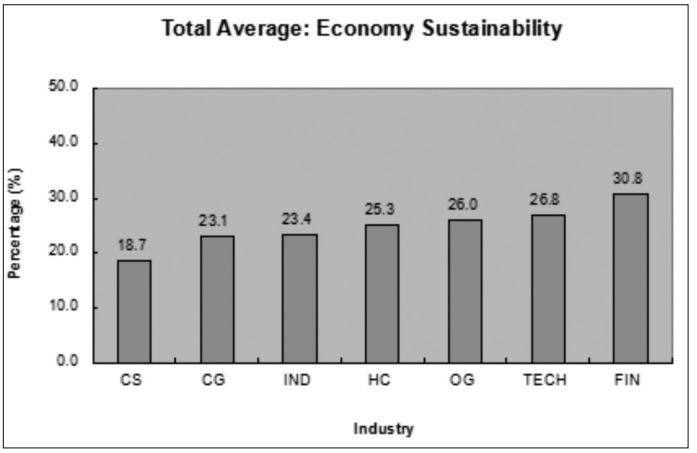

Figure 4: Total average of economic sustainability score by industry

HC has achieved the highest score at 22.7%. It can be concluded that health care industry demonstrated better results in terms of social sustainability.

The findings showed that each industry has the tendency to focus on different aspects of sustainable development. Technology industry is the most sustainable industry in this study. Technology industry also found to be environmental sustainability driven. Meanwhile, financial industry was found to be more focused on economic sustainability and Health Care industry was leaning towards social sustainability. The findings also indicated that each industry possessed all the three pillars of sustainable development and it can be interpreted that all the industries show commitment and effort towards achieving sustainability although there are still a lot of improvements that needed to be done.

Descriptive Statistic on WEHAB Initiative

Further analysis on the SAM results has been done to resolve the low sustainability scores of all industries. From the WEHAB initiative

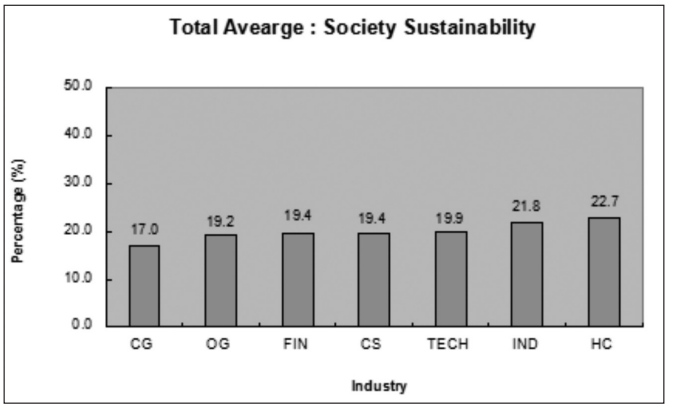

Figure 5: Total average of social sustainability score by industry

sustainability assessment by SAM, the finding indicated that each industry did not have the required balance in pursuing sustainability practices under the consideration of WEHAB initiative. It means that the industries only focus on certain elements of WEHAB initiative while putting less effort and consideration on the others. The results are as shown in Table 5.

The scores for water sustainability were not more than 10% which only recorded between 5% and 9%. As shown in Figure 6, CG obtained the highest score of water sustainability at 8.9% but it is still considered as very low. On the other hand CS has the lowest score at 5.2%. The findings indicated that all industries still lack of water sustainability practices. MNCs still need to emphasize on water sustainability practices in order to contribute to global sustainability.

In terms of energy sustainability, the scores obtained were between 11% and 27%. TECH has recorded the highest score at 26.8% and HC with the lowest score at 11.0%. Figure 7 showed that IND, FIN and OG scored 17.4%, 20.6%, 21.2% respectively, followed by CS at 12.8% and CG at 11.9%. It shows clearly that there is a big difference in terms of energy sustainability score between TECH and other industries especially HC, CG and CS which was ranked between 14% and 16%. The gap indicated that HC, CG and CS still need to improve their sustainability practices towards energy sustainability in order to achieved global sustainability.

Score by Industry

Observation in the aspect of health sustainability demonstrated that the scores obtained for all the industries were between 2% and 13%. Figure

Table 5: Total average of sustainability by WEHAB initiatives

Industry	**CG**	**CS**	**FIN**	**HC**	**IND**	**OG**	**TECH**
Total Average of Sustainability by WEHAB (%)							
W-Water	8.9	5.2	5.8	6.7	6.0	8.5	8.3
E - Energy	11.9	12.8	20.6	11.0	17.4	21.2	26.8
H - Health	6.2	3.7	3.9	12.8	3.9	2.6	5.2
A - Agriculture	12.6	15.7	7.5	4.1	2.8	3.4	5.3
B - Biodiversity	4.6	5.7	3.6	10.7	13.0	11.6	8.0
TOTAL AVERAGE (W+E+H+A+B)	8.9	8.6	8.3	9.0	8.7	9.5	10.7

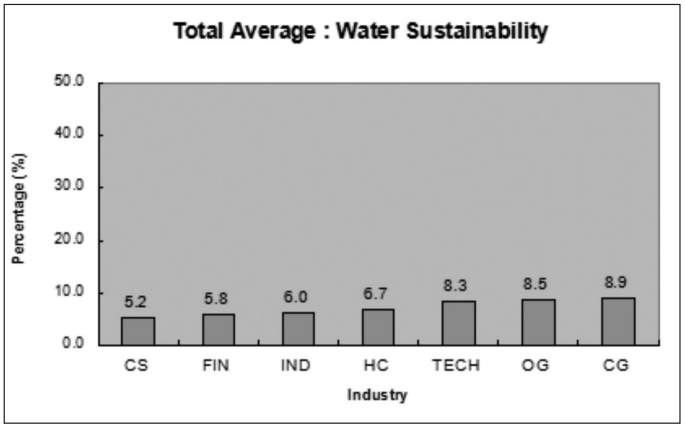

Figure 6: Total average of water sustainability by industry

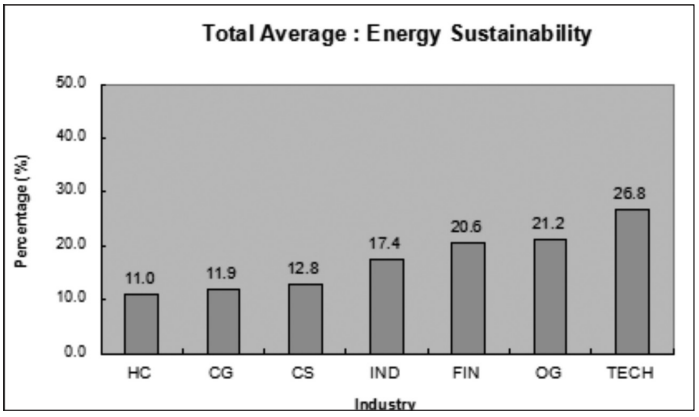

Figure 7: Total average of energy sustainability

8 showed that only HC scored more than 10% which was 12.6% while other industries' scores were relatively low. The lowest score was recorded by TECH at only 2.6%. Although HC had the highest score, it is still insufficient as the score is still being considered as low (Khosy *et al.*, 2013). HC is expected to perform well in terms of health sustainability since the nature of the industry itself is related to health. The findings indicated clearly that most of the industries were still lack of sustainability practices towards health sustainability. Therefore, further action need to be taken by MNCs on this initiative in order to contribute towards global sustainability.

The scores of 2% to 16% have been recorded by the selected industries in the element of agriculture sustainability. CG achieved the highest score at 15.7% while

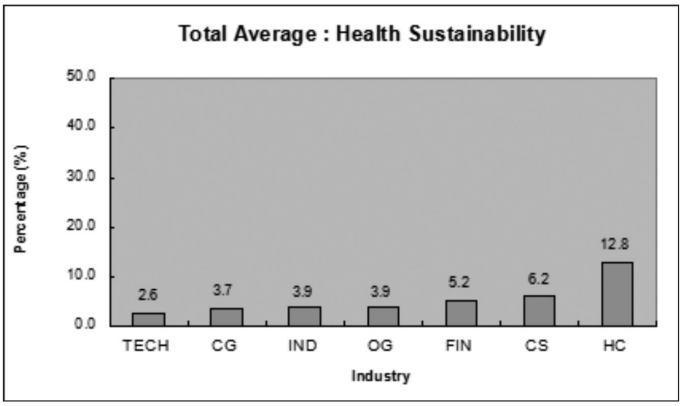

Figure 8: Total average of health sustainability by industry

IND with the lowest score at 2.8% as shown in Figure 9. Other industries scored less than 10% except CS at 12.6%. The finding indicated that consumer based business more focused towards agriculture sustainability. MNCs need to enhance their sustainability practices towards achieving higher level of agriculture sustainability.

In the aspect of biodiversity sustainability (Figure 10), the scores obtained were between 3% and 12%. OG recorded the highest score at 11.6% and FIN with the lowest score at 3.6%. HC achieved the score of 10.7% while the rest of industries scored less than 10%. All the industries show commitment towards biodiversity sustainability but in achieving higher level of biodiversity sustainability, significant improvements is required in their sustainability practices.

Through this study that related with WEHAB initiative assessment, the trends of aspects of sustainability that are being focused by the industries have been established. The finding indicated that most of the industries are energy sustainability driven. In terms of water, health, agriculture and biodiversity sustainability, major improvement still required for MNCs in contributing to the global sustainability. This huge gap was actually creating imbalance and could be an obstacle in achieving global sustainability. It can be seen clearly in the Table 5 that the score of total average of WEHAB initiative according to each industry are less than 11%.

Descriptive Statistic on Industry's Sustainability

In order to understand industry's sustainability tendency towards WEHAB initiative extensively and to identify sustainability areas that needed to be emphasized by MNCs, data acquired from SAM is being presented and discussed by type of industry. Table 6 shows the summary of total average of sustainability scores according to each industry for each area.

Based on Table 6, the total average of sustainability of industries were at a low level (13% to 16%). The finding found the factor that

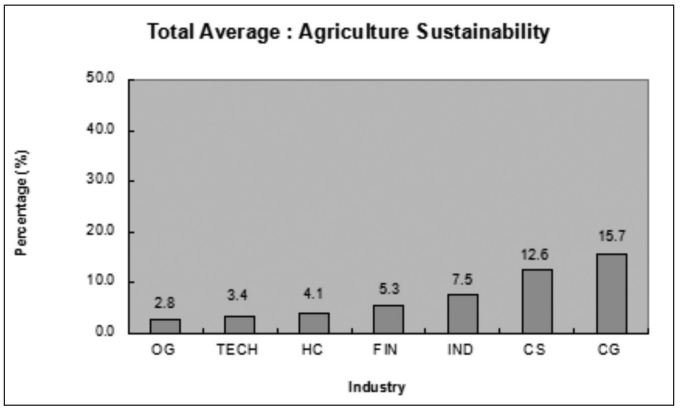

Figure 9: Total average of agriculture sustainability score by industry

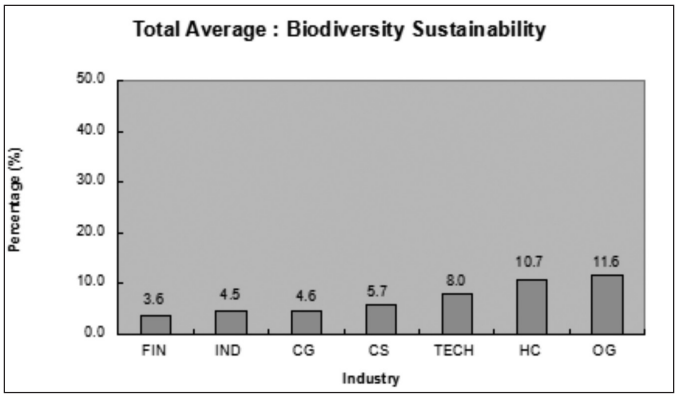

Figure 10: Total average of biodiversity sustainability score by industry

Table 6: Summary of total average scores of sustainability for all components according to each industry

Industry	CG	CS	FIN	HC	IND	OG	TECH	
Total Average of								**Total Average**
Environmental Sustainability (%)	23.9	24.5	25.5	18.4	26.4	25.3	27.1	24.4
Economic Sustainability (%)	23.1	18.7	30.8	25.3	23.4	26.0	26.8	24.9
Social Sustainability (%)	19.4	17.0	21.8	22.7	19.2	19.9	19.4	19.9
Environmental Education/ Sustainability Development (%)	11.1	10.1	13.2	13.9	11.7	11.7	17.3	12.7
WEHAB Sustainability (%)	8.9	8.6	8.3	9.0	6.9	9.5	10.7	8.9
Climate change/Disaster Risk Management (%)	9.6	8.0	10.1	8.0	13.4	20.3	10.1	11.4
Poverty/Population (%)	12.0	10.1	15.6	12.7	10.9	11.7	10.5	11.9
Production/Consumption	16.4	18.8	10.4	16.5	16.4	17.1	21.4	16.7
Total Average of Sustainability (%)	13.3	12.5	14.1	13.6	13.0	15.0	15.5	

contributed to the low score of total average of sustainability was the results obtained for WEHAB sustainability (7% to 11%) of every industry. Further analysis was done to each industry in order to examine the areas that needed to be improved by the MNCs.

Consumer Goods (CG)

Figure 11 shows that CG obtained low scores for biodiversity, health and water aspects of sustainability at 4.6%, 6.2% and 8.9% respectively. CG scored relatively high in energy and agriculture sustainability at 11.9% and 12.6% respectively. It could be concluded that CG are biased towards agriculture sustainability.

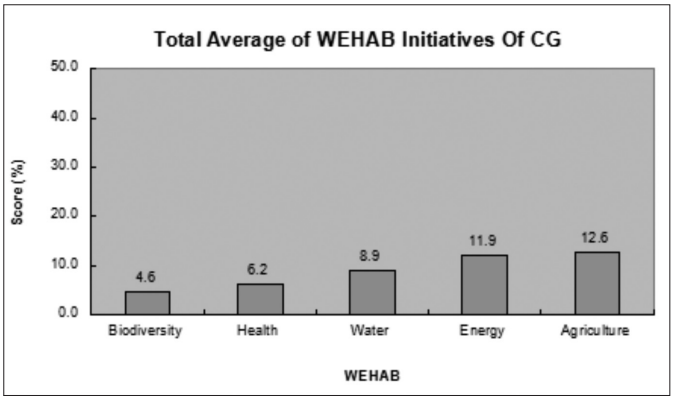

Figure 11: CG sustainability scores on WEHAB

Consumer Services (CS)

Referring to Figure 12, lowest scores have been obtained by CS for health (3.7%), water (5.2%) and biodiversity (5.7%) aspects of sustainability. Similar to CG, CS also scored relatively high in energy and agriculture sustainability at 12.8% and 15.7% respectively. It could be said that CS leaned more towards agriculture sustainability.

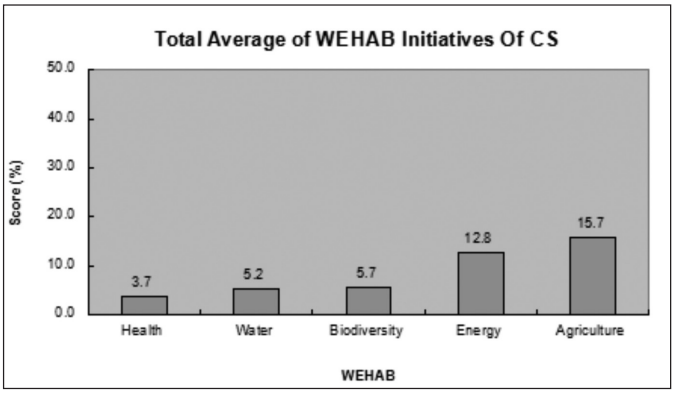

Figure 12: CS sustainability scores on WEHAB

Financial (FIN

Figure 13 shows that FIN obtained low scores for biodiversity, health, water and agriculture aspects of sustainability at 3.6%, 3.9%, 5.8% and 7.5% respectively. FIN has a high tendency towards energy sustainability with the highest score of 20.6%.

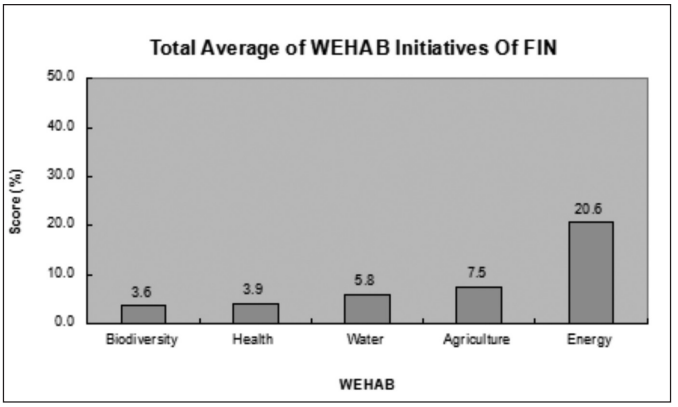

Figure 13: FIN sustainability scores on WEHAB

Health Care (HC)

By referring to Figure 14, it can be seen that HC obtained lowest scores in the aspect of agriculture and water sustainability at 4.1% and 6.7% respectively. HC scored relatively high in biodiversity (10.7%), energy (11%) and health sustainability (12.8%). It illustrated that HC having higher tendency towards health sustainability.

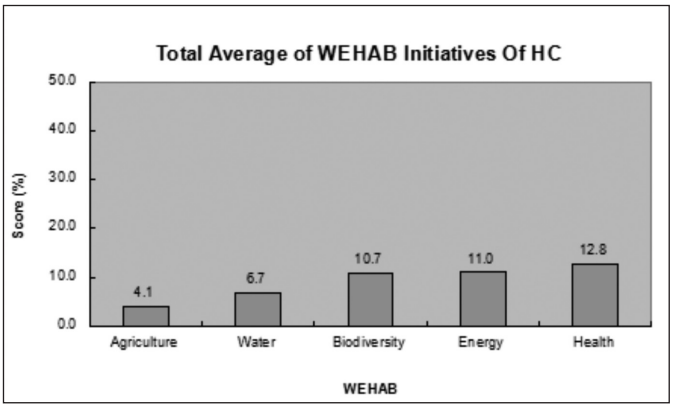

Figure 14: HC sustainability scores on WEHAB

Industrial (IND)

Lowest scores have been obtained for agriculture (2.8%), health (3.9%), biodiversity (4.5%) and water sustainability (5%) as shown in Figure 15. IND scored significantly in energy sustainability at 17.4% showing its tendency in this aspect of sustainability.

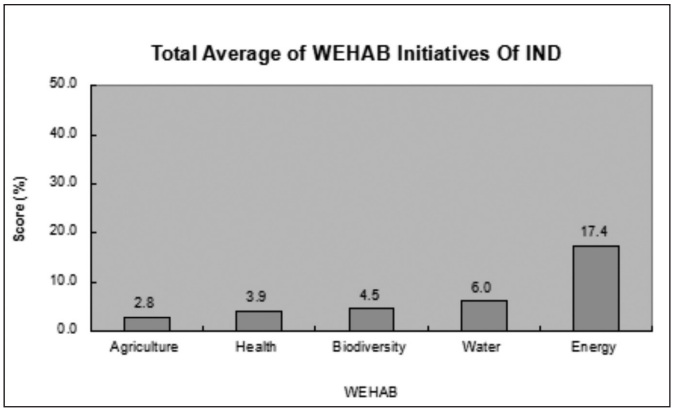

Figure 15: IND sustainability scores on WEHAB

Oil and Gas (OG)

OG industry has lowest scores in terms of health, agriculture and water sustainability aspects at 2.6%, 3.4% and 8.5% respectively. On the other highest score has been achieved in biodiversity sustainability and energy sustainability at 21.2%. It shows that OG has similar trend of tendency towards energy sustainability similar to FIN and IND. Refer to Figure 16 for the overall scores obtained by OG.

Technology (TECH)

Figure 17 demonstrated the scores achieved by TECH towards WEHAB initiative. TECH obtained less than 10% scores for health, agriculture, biodiversity and water sustainability at 5.2%, 5.3%, 8.0% and 8.3% respectively. TECH has the most significant score in energy sustainability showing its tendency in this aspect of sustainability.

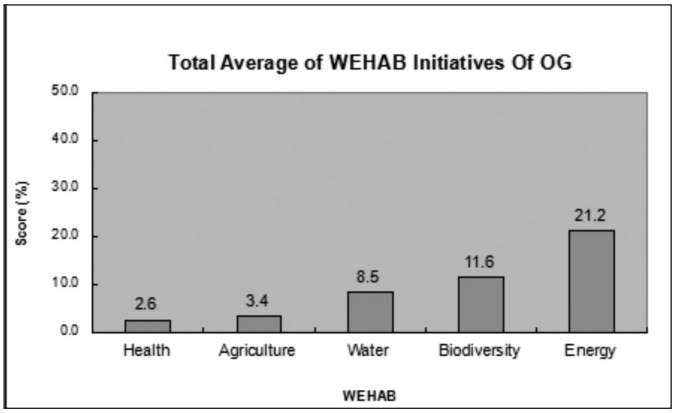

Figure 16: OG sustainability scores on WEHAB

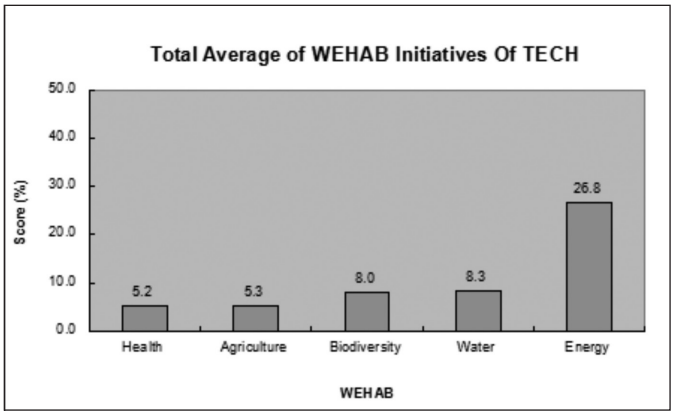

Figure 17: TECH sustainability scores on WEHAB

Descriptive Statistic on Three Cross-Sectoral Issues according to Industry

Earlier results that have been achieved in this sustainability assessment study of multinational companies have shown that most of the industries that have been involved in this research are driven in the aspect of energy sustainability. An assessment related to three cross-sectoral issues (climate change/ disaster risk management, population/poverty and production/consumption) that have been addressed by MNCs. Figure 18 presented the analysis that had been done related to the cross-sectoral issues.

In addressing the climate change issue as shown in Figure 18, OG has registered the highest total average score of 20.3% among all industries that have been assessed. On the other hand, the rest of the industries just managed to score around 8% - 10% while CS and HC have managed the lowest score at 8%. Focusing on population and poverty issues, the highest score obtained by FIN at 15.6% while the lowest score is 10.1% acquired by HC. The remaining industries managed to score between 11% and 12%. In terms of production and consumption issues, generally all the industries that have been studied registered average scores between 10.4% and 21.4%. The highest score obtained in this category is 21.4% (TECH) while the lowest score is 10.4% (FIN).

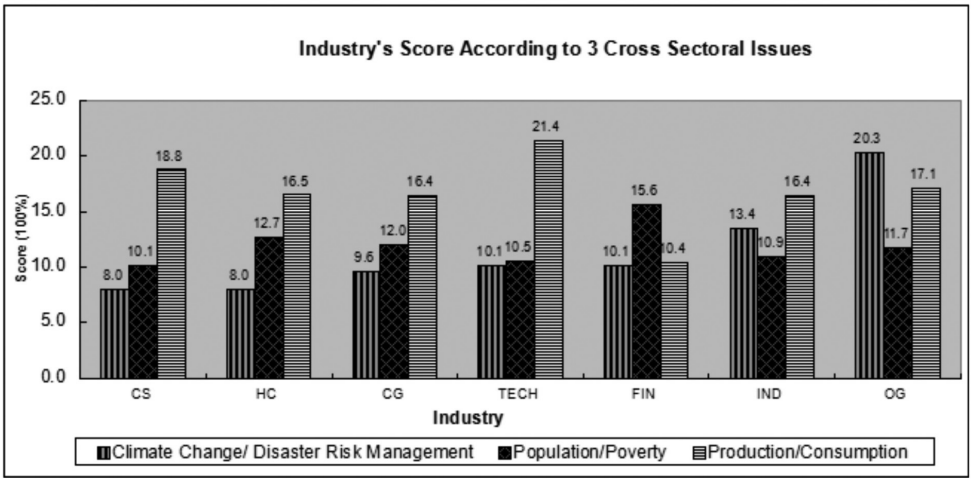

Figure 18: Industry's score according to three cross sectoral issues

Through all the analysis that has been completed in this sustainability assessment study, it can be concluded that all the industries that involved do have all the elements of the SD pillar. Most of the industries focused towards achieving economic and environmental sustainability. In terms of WEHAB initiative, energy is the aspect of sustainability that has been given a lot focus. Through the assessment of the cross-sectoral issues, it has been described that production/consumption is the most addressing issue by the MNCs.

Discussion and Conclusion

Inclusion of sustainable practices as business strategies by MNCs is a positive development in achieving sustainability in an organisation which could provide decisive impacts on economy, social and environment aspects.

Results obtained from the sustainability assessment that have been completed illustrated that most of the industries are concentrating their focus more towards economy and environment then followed by society component. To be more specific, FIN, OG and HC industries are leaning more towards economic sustainability while TECH, IND, CG and CS proved to be more focused in terms of environmental sustainability (Table 5). Social sustainability appears to be the least interested component among the MNCs. Nevertheless, the score range for these three components is around (20-25%), suggesting that MNCs sustainable development agenda is balanced.

According to Goodland (2002), the widely accepted definition of economic sustainability is maintenance of capital or keeping capital unharmed. Capital in the view of economic is factors of production (i.e. land including natural resources, labour, capital and enterprise) that are used to create goods or services. In order to ensure economic sustainability, the capital must be managed efficiently. Through the analysis, it could be seen that FIN, OG and HC demonstrated less concerned to the natural capital since their scores for agriculture, biodiversity and water sustainability are relatively low. This finding shows agreement with Goodland (2002) statement which described that economic always values things in money term and rarely being concerned with natural capital. Hence, the lower score does reflect their level of commitment towards environmental sustainability which can be considered less sustainable for this certain area.

TECH, IND, CG and CS industries managed relatively higher scores in terms of environmental sustainability which indicate that natural capital is an area of concern, particularly to industries with higher score for agriculture component. These industries also shown to be focusing on water sustainability as well. This scenario could be related to their nature of businesses that associated application of land and water for agriculture activities in order to fulfil customer needs and requirements.

In terms of effort on education for sustainable development, MNCs that have been studied only managed to achieve a 13% average which is relatively low. ESD means including key sustainable development issues into teaching and learning for climate change, disaster risk reduction, biodiversity, poverty reduction and sustainable consumption. The low score that has been registered reflects the MNC's commitment in educating its stakeholder towards sustainable development. The leaders of these MNCs should aware that by developing an understanding of sustainable development among the stakeholders, it will motivate and empower them towards sustainable development.

MNCs scored zero for water, energy, health, agriculture and biodiversity sustainability components suggesting that no integration of their sustainability practices with the WEHAB initiative. This is one of the factors that contributed to low total average of sustainability score for each industry despite higher score of MNCS in all areas. However achieving global sustainability demand collective cooperation from stakeholders particularly business entities.

There is a trend that can be recognized. MNCs show sustainability commitment on components which are related to their businesses. TECH, OG, FIN and IND put a higher commitment towards energy sustainability which could be highly associated with their nature of businesses and at the same time reflecting their commitment on environmental sustainability. HC which is related with health business has shown a significant interest towards health sustainability (Figure 15). A similar trend can be spotted when CG and CS are the industries that utilized natural resources either directly or indirectly in their production found to be leaning towards agriculture and water sustainability (Figure 12 and Figure 13).

A lot of improvements are still needed in order to develop sustainable development strategies for MNC businesses since the total average of sustainability for each industry are relatively low (less than 20%). Esty & Winston (2009) stated that in the very near future no company will be positioned as industry leader without considering environmental issues into its strategy. Every company also should be more concerned in finding a balance between economy, environment and society responsibilities in achieving global sustainability.

Most of the industries tend to address consumption and production issues rather than the climate change and disaster risk management issues or population and poverty issues. This is because consumption and production issues are more related to their businesses. Many leaders focus on cost reduction approach in terms of production through cost-saving operation and energy saving product. Considering that, economic sustainability has been MNCs most concerned component as well as commitment on energy component which is crucial for sustainable production and consumption. Surprisingly, climate change appears to be the least desirable issue to be addressed by MNCs.

From the results that have been obtained, MNCs shown higher commitment towards economic and environmental sustainability and these industries are also committed in resolving issues regarding consumption and production. These findings could provide some insights for business leaders in planning for their sustainability agenda in attaining global sustainability.

In conclusion, the components of environment, social and economic sustainability average scores have been found to be quite balanced in the range of 20-25% for all MNC industries that have been studied. For sustainable development pillars, economy and environment appear to be the most focused sustainability components while in terms of cross-sectoral issues and sectoral challenges, production and consumption are the areas that being given a lot of concentration. MNCs aslo have shown high commitment for energy sustainability component from WEHAB initiative. This is consistent with Velazquez (2014) & Cavusgil (2014) who emphasized the importance of the capacity of business organization to sustain economically and meeting human's need without harming future generation. In other words, MNCs commitment on sustainability is about profit making with cost and energy saving for production and consumption. It also can be observed that sustainable development agenda are progressing gradually despite of the commitments that have been shown.

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