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A Proposed Corporate Social Responsibility Model to Develop a Coherent Sustainability Commitment

Tariq H. Ismail¹, Mohamed Adel Elhamy², Nayera Abdeldayem Eltamboly³

1-Cairo University, Egypt

2-Tanta University, Egypt

3-Tanta University, Egypt

Corresponding Author : Tariq H. Ismai

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Abstract

This study develops a proposed model based on the Analytical Hierarchical Process model (AHP) and Standard and Poor's/ Egypt Stock Exchange Environmental, Social and Governance Index (S&P/EGX ESG) to measure and maximize the company's corporate social responsibility (CSR) performance. The results confirm that the company that successfully undertakes this model can develop a coherent sustainable disclosure commitment that contributes to a never-ending journey of continuous improvement in the company's CSR performance. Furthermore, based on the empirical results of the proposed model implemented at SC which is the targeted company used for the case study, we find that this model enables the company to identify, measure and track its CSR performance over three years from 2017 to 2019 and in comparison with the S&P/EGX ESG benchmark at the KPIs level. In addition, the researchers develop a sustainability outcomes report to reflect the strengths and weaknesses in the current situation of SC. Therefore, it enables the company to transparently communicate the results of its performance in a high-quality report, which finally contributes to the achievement of sustainable development as an end vision.

Keywords: Corporate social responsibility, governance, sustainable development, analytical hierarchical process model, EGX, Egypt

JEL Classification: C63, M14, M20, M34, M48

1.Introduction:

Nowadays, companies all over the world that need to sustain in the current competitive environment, realized the importance of considering and applying various CSR practices among their core business process. Hence, they are committed to CSR logic and supporting their local surrounding community. Subsequently, the company that considers various CSR issues has to decide which CSR aspect is more important to emphasize.

AHP model which is developed by T.L. Saaty can be defined as a measurement method that depends on pairwise comparisons and experts' judgments to get priority scales (Saaty, 2008). Hence, it can provide a reliable method to rank the various CSR aspects according to their importance in achieving the company's overall goal. In literature, various studies use the AHP model in the area of CSR to rank the various CSR aspects according to their relative importance based on experts and decision makers' perceptions (for example, Dixon-Ogbechi & Jagun, 2013; Halimoen, Syahrin, & Mawengkang, 2015; Said, Zakaria, Syed-Noh, Sidek, & Ahmad, 2016). In the current research, we attempt to take a step on that path and adopt not only the AHP model, but also S&P/EGX ESG index as the crucial inputs that support model construction and implementation.

Concerning the S&P/EGX ESG index, the Egyptian Exchange (EGX) collaborated with the Egyptian Institute of Directors and Standard & Poor's and Crisil to launch the S&P/EGX ESG Index in March 2010. It is the first index and the only one in the Middle East and North Africa Region. This index is aimed to track and measure the performance of EGX listed companies in different environmental, social, and governance issues, to identify and rank the best 30 performing companies with respect to the ESG issues in the Egyptian Market. The governance perspective includes various criteria to assess the company's performance in this perspective. For example, ownership structure and shareholder rights, board and management structure and process, financial and operational information, corporate governance and corruption, and business ethics and corporate responsibility. The environmental and social perspective includes also different criteria to assess the environmental and social conduct of the company. For instance, environment, employee, community, and customers/ products. So this index can identify and demonstrate the companies that are leaders in the successful consideration of various environmental, social, and governance practices. Therefore, this study will adopt S&P/EGX ESG Index as the suitable benchmark. Moreover, this index is employed to measure and compare performance of EGX listed companies along the different environmental, social, and governance parameters relative to their peers. Therefore, it provides a more realistic picture to the Egyptian companies that fairly reflects their environmental, social, and governance performance at the key performance indicators level (KPIs) level. So, they will be able to identify the strengths and weaknesses in their performance.

Therefore, this research aims at developing a model that incorporates both the weights derived from the AHP model and offers comparisons of the company's CSR performance with the benchmark index (S&P/EGX ESG) at the KPIs and practically implements it. Our key finding is that this model can highlight and quantify the economic, environmental, and social conduct of the company that implements it. Hence, it points to areas ripe for intense improvement and transparently communicates the results of its overall CSR performance.

The organization of the paper is as follows: section 2 presents our motivation. Section 3 addresses the necessary steps to develop the proposed model. Section 4 explains our empirical procedure. Section 5 clarifies the details of data analysis. Section 6 describes the results of the proposed model. Finally, we conclude in section 7 with some suggestions for research and S&P/EGX ESG Index setters.

2.Motivation: A Literature Review

In this section, we present a critical review of the evolution of the CSR concept, its relation to sustainability and sustainable development, and its orientation across countries, in order to provide more visibility into the importance of the research topic.

2.1.The Evolution of CSR Concept

The CSR concept had a long history over decades. It introduced the vocabulary of businessmen, academics, and researchers who are competing over years to reach an accepted one. There are different definitions and no globally accepted ones. This section tries to survey the development of various definitions over the years and the different views describing this definition as an attempt to reach a more comprehensive one.

The first group of studies emphasized that social responsibility means that a business company had obligations in addition to achieving profits, represented in acting towards solving society members' problems. For example; (Davis, 1960; Frederick, 1960; Elbing, 1970; Sethi & Prakash 1975; Drucker, 1984). Other studies advocated the idea that CSR had its theoretical underpinnings in stakeholder theory (Carroll, 1991; Barnett, 2007; Kelly & Alam 2008; Asif, Searcy, Zutshi, & Fisscher 2013) and the researchers agree with this path of definitions. This path focused on the implementation of various CSR activities to achieve the welfare of different groups of stakeholders, including owners, creditors, customers, employees, suppliers, governments, unions, the local community, and the general public.

The next group of studies broadens the CSR concept to include the responsibility of the company to contribute to a healthy natural environment (Maignan & Ferrell, 2004; Kelly & Alam, 2008; Babiak & Trendafilqva 2011). This of course could be achieved through efforts undertaken by the company to abate, reduce, and control pollution and other negative outcomes the company operations had on the community. While, other studies interpreted CSR as a concept that adopts the theme of governance and examined the relationship between them (Albareda, 2008; Tuan, 2014; Mio, Venturelli, & Leopizzi, 2015, Stuebs & Sun, 2015; Alshbili et al. 2019; Rinaldi, 2019).

The last group of studies realized the importance of sustainability issue to be connected with CSR to achieve a broader vision of sustainable development (Carroll & Shabana, 2010; Duarte et al., 2010; Crişan & Borza, 2015; Smith & Sharicz, 2011; Esen, 2015; Ilies, 2015: 94).

In the light of the previous discussion, the researchers can conclude that there are different definitions attempted to provide various interpretations concerning the role of a business company and its responsibilities in the community where it operates. The most common name of CSR at the beginning is social responsibility. The definition has been developed over the years from being a simple definition that focuses on the responsibility of businessmen to society, and then developed consequently to include responsibility toward different stakeholders. Finally, it considers new themes focused on environmental disturbances and pollution, governance, and sustainability issues.

The previously displayed attempts by researchers to reach a globally accepted definition of CSR enrich the definition to consider and cover multiple areas. Then, from our point of view, CSR can be defined as a flexible multi-dimensional concept that considers various economic, social, environmental aspects. So, it encourages companies to voluntarily act in an economic, social, and environmentally responsible manner through their interaction with different stakeholders' groups and hence contributes to sustainable development. Therefore, companies that undertake this concept can guarantee their competitive position and ensure their long-term survival.

2.2. The Relationship between CSR, Sustainability, and Sustainable Development.

The Introduction of social and environmental concerns in the economic activity of companies represents the accepted definition of CSR. Therefore, CSR can be viewed as a part of the sustainable development concept, which means a business contribution to achieving sustainable development (Nicolae & Sabina, 2010). In brief, sustainable development can be seen as an end goal or primary objective for companies, with CSR as means toward this end (Cronje & Wyk, 2013, P. 194). While, corporate sustainability focuses on growth and profitability through the accomplishment of various wise business practices along the different environmental, social, and economic axes. Finally, Bouglet et al., (2012) defined sustainable development as the development that meets the needs of the present generations without compromising the ability of future generations to meet their different needs.

Figure (1) presents in detail the relationship between CSR, sustainability, and sustainable development.

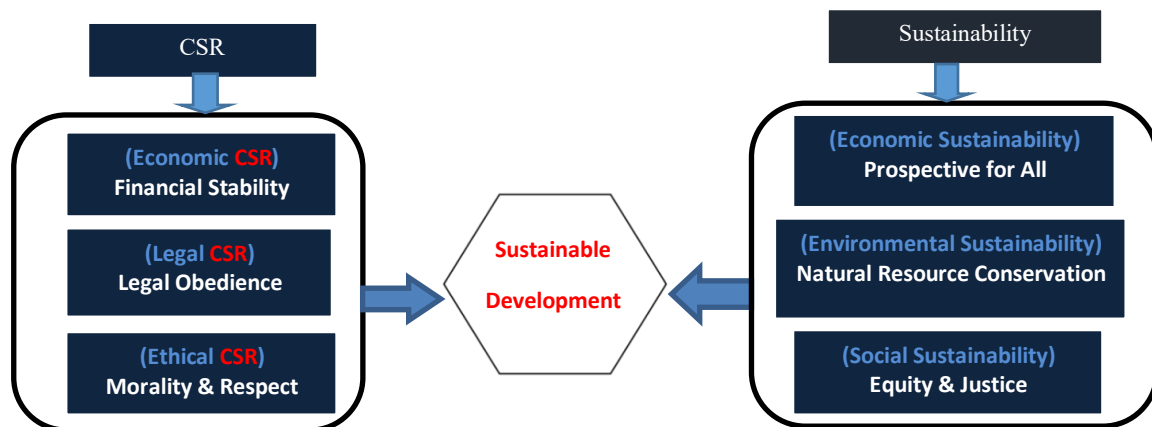


Figure 1. The relationship between CSR, sustainability and sustainable development

In conclusion, both CSR and sustainability concepts are closely related to each other. CSR emphasizes responsible actions that beneficially contribute to community welfare, so it considers past and present actions. While sustainability focuses on growth and profitability without compromising the planet, the people, and the economy, so it is a forward-looking concept. Therefore, the proposed model reflects the integration of both sustainability and CSR concepts that considers the past, the present, and the future actions. Through the accomplishment of a set of responsible actions along the different economic, environmental, and social aspects that positively impact the company's corporate image and boost the company toward long enduring success. Finally, the integrated sustainable CSR concept will achieve sustainable development as an end vision.

2.3. The Orientation of CSR Initiatives across Countries:

The researchers review the literature relating to the orientation toward CSR across different countries to understand whether different countries realize the different types of CSR in the same way or not.

The study of Orpen (1987) investigated the attitudes of the United States and South Africa managers toward CSR and realized that different community reacts differently to the idea of CSR. Also, Burton, Farh, & Hegarty (2000) emphasized that although students in Hong Kong and the United States recognize the different types of responsibilities in similar ways, the various cultures give different weights to various types of corporate responsibility. Furthermore, Maignan & Ralston (2002) conduct a study in France, Netherlands, United Kingdom, and the United States and found that different countries hold different perspectives regarding the relative importance of being perceived as socially responsible and which CSR aspects are more important to emphasize. Recently, Welford (2005) proved that CSR is linked to the economic development of countries and CSR policies are based on local issues and are linked to traditions at the country level. Lately, Husted & Allen (2006) acknowledged that local CSR issues exist according to the needs and circumstances of each society. For example, companies consider the fight against unemployment and AIDS as essential, although they are not considered a part of the CSR agenda of many companies all over the world. Finally, Matten & Moon (2008) do comparative research between Europe and United States in CSR and also realized a remarkable difference between companies in those countries regarding CSR issues.

The above-discussed literature provides strong evidence that supports the idea that all countries worldwide realized the importance of the CSR concept, its aspects, and the benefits perceived from acting in a socially responsible manner. However, across countries, each country gives a different importance to each CSR aspect. This conclusion stems from the idea that CSR as a concept represents an obligation to meet local society's needs in various economic, environmental, and social fields. So CSR activities should be tailored according to local society's needs. Therefore, the AHP model will be introduced as a reliable method to rank various CSR aspects according to their importance in meeting local community needs.

3. The necessary steps to develop the proposed model:

There are necessary steps needed to develop the proposed model as shown in Figure (2):

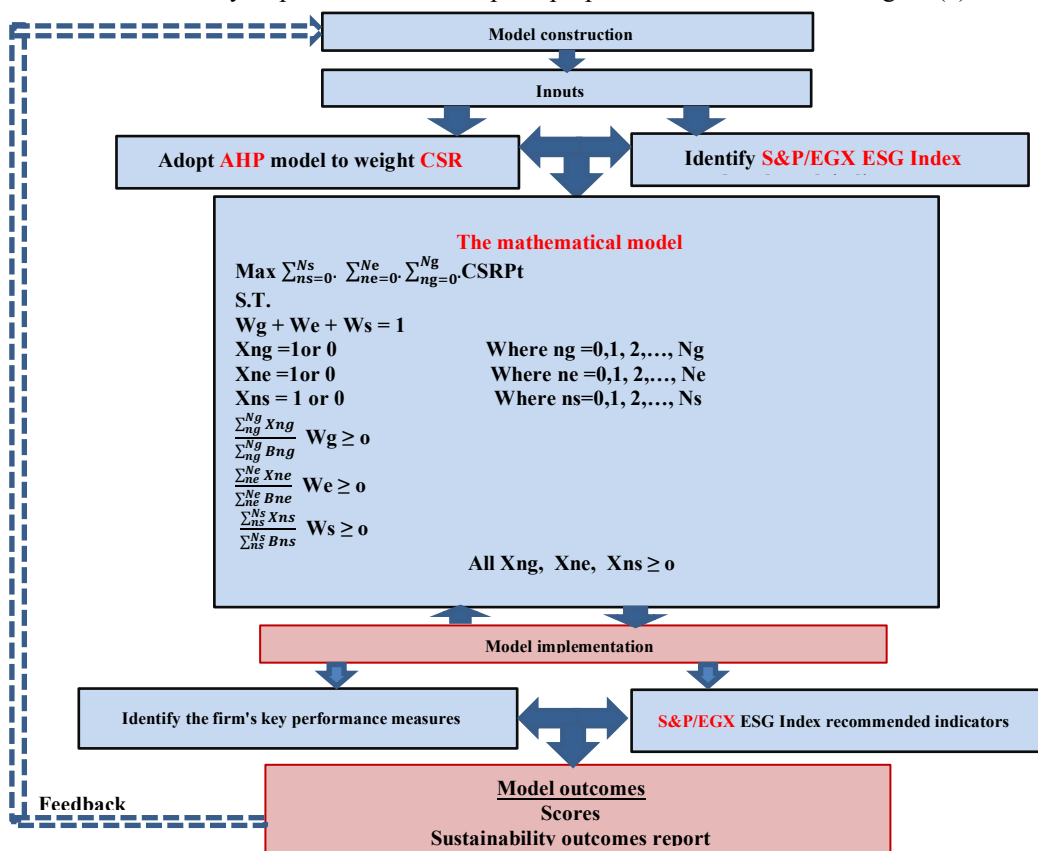


Figure 2. The necessary steps to develop the proposed model.

3.1. Model Construction

AHP model and S&P/EGX ESG index are the necessary inputs invoked into the proposed model. AHP model company the relative weight that is assigned to each CSR aspect according to its relative importance in achieving the company's overall goal. Since AHP model provides a useful mechanism to identify the relative weight that is assigned to each CSR aspect according to its relative importance in achieving the company's overall goal. Hence, it reduces bias in decision making and checks the inconsistencies in the decision makers' judgments. Concerning S&P/EGX ESG Index represents the suitable benchmark that is developed in collaboration with international partners and is customized to cope with the Egyptian environment. Moreover, this index is applied to the EGX listed companies to measure their performance along with the different environmental, social, and governance parameters relative to their peers. Therefore, it provides a more realistic picture of the Egyptian companies that fairly reflects their environmental, social, and governance performance.

The mathematical formula for the proposed model can be expressed as follows:

The objective function:

The objective function aims to maximize the company's CSR performance during a specific period. It can be expressed as:

$$\text{Max } \sum_{ns=0}^{Ns} \sum_{ne=0}^{Ne} \sum_{ng=0}^{Ng} \text{CSRP}_t$$

Where:

CSRP: represents the overall corporate social responsibility performance of the company.

t: represents the year of analysis.

ng: represents the index for governance and economic performance measures, where $ng = 0, 1, 2, \dots, Ng$

Ng: represents the number of performance measures in the governance and economic aspect.

ne: represents the index for environmental performance measures, where $ne = 0, 1, 2, \dots, Ne$

Ne: represents the number of performance measures in the environmental aspect.

ns: represents the index for social performance measures, where $ns = 0, 1, 2, \dots, Ns$

Ns: represents the number of performance measures in the social aspect.

Subject to

The constraints:

$$W_g + W_e + W_s = 1$$

W_g: represents the relative weight assigned to governance and economic aspect.

W_e: represents the relative weight assigned to the environmental aspect.

W_s: represents the relative weight assigned to the social aspect.

This constraint reflects the summation of the relative weights assigned to governance, economic, environmental, and social aspects equal one, and these weights were derived from AHP model results.

$$X_{ng} = 1 \text{ or } 0$$

Where $ng = 0, 1, 2, \dots, Ng$

X_{ng} = 1 represents that the governance and economic performance measure *ng* is mentioned.

X_{ng} = 0 represents that the governance and economic performance measure *ng* is not mentioned.

X_{ng}: represents the governance and economic performance measure *ng* in the governance and economic aspect.

This constraint describes the performance measure of the governance and economic aspect. It takes a value equal to one if it is considered by the company and it takes a value equal to zero otherwise. This constraint will be repeated according to the number of governance and economic performance measures.

$$X_{ne} = 1 \text{ or } 0$$

Where $ne = 0, 1, 2, \dots, Ne$

X_{ne} = 1 represents that the environmental performance measure *ne* is mentioned.

X_{ne} = 0 represents that the environmental performance measure *ne* is not mentioned.

X_{ne}: represents the environmental performance measure *ne* in the environmental aspect.

This constraint describes the performance measure of the environmental aspect. It takes a value equal to one if it is considered by the company and it takes a value equal to zero otherwise. This constraint will be repeated according to the number of environmental performance measures.

$$X_{ns} = 1 \text{ or } 0$$

Where $ns = 0, 1, 2, \dots, Ns$

X_{ns} = 1 represents that the social performance measure *ns* is mentioned.

X_{ns} = 0 represents that the social performance measure *ns* is not mentioned.

X_{ns}: represents the social performance measure *ns* in the social aspect.

This constraint describes the performance measure of the social aspect. It takes a value equal to one if it is considered by the company and it takes a value equal to zero otherwise. This constraint will be repeated according to the number of social performance measures.

$$\frac{\sum_{ng}^{Ng} X_{ng}}{\sum_{ng}^{Ng} B_{ng}} W_g \geq 0$$

B_{ng} : represents the performance measure ng recommended by the benchmark index in the governance and economic aspect.

This constraint describes the total number of performance measures mentioned by the company divided by the total of performance measures recommended by the index in the governance and economic aspect, in order to get the total percentage of the company's performance in the governance and economic aspect. Then, this percentage is multiplied by the relative weight assigned to the governance and economic aspect in order to get the weighted score of the company's performance in the governance and economic aspect.

$$\frac{\sum_{ne}^{Ne} X_{ne}}{\sum_{ne}^{Ne} B_{ne}} W_c \geq 0$$

B_{ne} : represents the performance measure ne recommended by the benchmark index in the environmental aspect.

This constraint describes the total number of performance measures mentioned by the company divided by the total of performance measures recommended by the index in the environmental aspect, in order to get the total percentage of the company's performance in the environmental aspect. Then, this percentage is multiplied by the relative weight assigned to the environmental aspect in order to get the weighted score of the company's performance in the environmental aspect.

$$\frac{\sum_{ns}^{Ns} X_{ns}}{\sum_{ns}^{Ns} B_{ns}} W_s \geq 0$$

B_{ns} : represents the performance measure ns recommended by the benchmark index in the social aspect.

This constraint describes the total number of performance measures mentioned by the company in the social aspect divided by the total number of performance measures recommended by the index in the social aspect, to get the total percentage of the company's performance in the social aspect. Then, this percentage is multiplied by the relative weight assigned to the social aspect in order to get the weighted score of the company's performance in the social aspect.

Non-negativity constraint:

All X_{ng} , X_{ne} , $X_{ns} \geq 0$

This constraint ensures that the decision variables which are X_{ng} , X_{ne} , and X_{ns} will not take any negative values in the solution of the problem.

The resulting self-tailored multi-dimensional performance measurement model is capable of defining and quantifying the CSR performance of the company and with respect to the benchmark at the KPIs level. Consequently, it can reflect a fair and clear view of the company's performance along each CSR aspect separately. So the company's contribution towards sustainable development will be highlighted. Consequently, this model provides the necessary information concerning what is measured for accurately and transparently informing the different stakeholders with the results of the company's CSR performance.

3.2. Model Implementation

The company needs to identify a set of key performance measures that translate the company strategy and reflect its sustainable CSR performance. Then, it has to display the KPIs recommended by S&P/EGX ESG index as the benchmark. Finally, the company has to compare its key performance measures with the recommended KPIs offered by the benchmark in order to get a clear and full picture of the company's performance along each CSR aspect separately. Consequently, the company can identify the strengths and weaknesses in its CSR performance in comparison with best practices. So, it can easily highlight the areas of inefficiencies that were ignored and needs more attention.

3.3. Model Outcomes

The outcomes of the proposed model can be represented as (i) first, the weighted score of the company performance in the governance, environmental, and social aspect, and (ii) second, sustainability outcomes report that describes clearly the results of the model and provides visibility into the various areas of strengths and weaknesses. The company can also repeat this model for many years in order to get more comparisons over its CSR performance during different years and with the benchmark index.

3.4. Feedback

Feedback loops to ensure the implementation of the necessary continuous improvement efforts in the company's whole business environment. So, continuous improvement is a never-ending process.

4. Research Method

This research adopted a quantitative research tool which is the analytical hierarchical process model (AHP). AHP model can arrange the factors that are selected in the hierarchy structure in a descending order starts with the goal then criteria then sub-criteria and finally decision alternatives (Saaty, 1990). Consequently, for the researchers to implement the AHP model, she collected the necessary data by developing a questionnaire that comprises a predetermined set of questions distributed to respondents. Based on the responses, the researchers can establish a pairwise comparison matrix to the criteria to develop priorities for the criteria in their ability to accomplish the company's overall goal.

With respect to the assessment of the quality of AHP model results, the consistency ratio is considered the suitable validity test which is implemented in the necessary steps for developing the AHP model. As consistency ratio indicates the degree of consistency in the pairwise comparisons which is derived from the decision-makers judgments. So, if the consistency ratio is less than 0.10, this means that the pairwise comparisons are consistent and the decision-maker does not need to revise his judgments. However, The study of Song & Kang (2016) claimed that the AHP model has disadvantages presented in the difficulty in maintaining consistency. Hence, they devised another method to address those disadvantages. However, this research insists to adopt the AHP model, since it has advantages presented in identifying the relative importance of each criterion and reduces the bias in decision making. With respect to the difficulties relating to consistency issues, this research develops a simple hierarchical structure that includes only three criteria. Hence, the consistency can be simply maintained. Therefore, the disadvantage that faces AHP model implementation is solved in this research.

Also, the research adopted the S&P/EGX ESG as the best practice that measures the performance of companies along with the various governance, environmental and social parameters. Then, the results of AHP and the key performance indicators KPIs recommended by the S&P/EGX ESG benchmark represent the vital inputs introduced to the proposed model that measures and maximizes the CSR performance at the KPIs level.

Then, the researchers examine this model in practice through the comparison of the information regarding the assessment of the governance, environmental and social conduct of SC Company, which is presented in the CSR section in its annual report along the different years starting from 2017 to 2019. As well, we compare this information with the benchmark information. Therefore, the resulting model enables SC Company to measure its CSR performance for each aspect solely and over the different years. Besides, it allows SC to compare its environmental and social performance over years, as well as compare its CSR performance with the detected best practices presented in the S&P/EGX ESG benchmark. So, the company can get more insights into its CSR performance situation over the different years. Lastly, the researchers develop a sustainability outcomes report to reflect the strengths and weaknesses in the current situation of SC. Therefore, the proposed model can measure and maximize the CSR performance of SC to develop a coherent sustainability commitment.

5. Data Analysis

This section presents the case study findings based on the implementation of the proposed model on the SC Company for the years 2017-2019.

5.1. Company Background:

SC is considered one of the largest cement producers in Egypt with a production capacity of about 12 million tons per year. It was incorporated as an Egyptian Joint Stock Company in 1977. SC is one of the Egyptian listed companies in EGX 100. However, it is not one of the listed companies in the S&P/EGX ESG index. So, the research implements the proposed model on SC that enables it to quantify, track, control, and communicate its overall CSR performance to develop a coherent sustainability commitment, then to be one of the listed companies in the S&P/EGX ESG index.

5.2. The Necessary Steps to Implement AHP Model on SC Company:

This section will explain clearly the necessary steps that SC has to follow to implement this model to obtain accurate results regarding its overall CSR performance.

5.2.1. Evidence to Support AHP Model Implementation.

From SC company shareholding structure, H group own 55.1% of SC. H group has companies all over the world in five geographical areas: Western and Southern Europe, Northern and Eastern Europe-Central Asia, North America, Asia-Pacific, and Africa-Eastern Mediterranean Basin. This means that this sustainability commitment is a global one to match all its branches worldwide. The question now is: Do the Egyptian branch presented by SC considers rearranging those initiatives according to the country's needs?

Unfortunately, the answer is no, because they did not introduce in their report anything about the choice of a reliable method to rank the various CSR aspects.

Since they adopt this sustainability commitment as it is, this means that they transfer the global commitment as it is to be a local one. Besides, there is international evidence that supports the idea that CSR activities should be tailored according to local society's needs. So, if SC Company transfers the global sustainability commitment, it has to reshape this commitment to meet local community needs. Then, it has to devote the necessary resources to implement the various sustainability initiatives according to their relative importance, instead of dealing with them in an equal manner. Therefore, the AHP model will be introduced as a reliable method to rank various CSR aspects.

5.2.2. The Development of the Hierarchical Structure of AHP Model

The researchers first tried to introduce the model to managers and employees of SC, but they refused to provide answers to the different questions. As the Company policy prevents any person in the company to provide answers to the questions that reflect their strategic trends because they believe that such information is confidential.

As a result, this model was conducted on 3S Ready Mix which is considered one of the SC clients who purchase a certain type of Ordinary Portland Cement and Sulphate Resistant Cement to process it further to provide Ready Mix Concrete. The questions are directed to the quality control ready mix plant manager, operation ready mix plant manager, and six consultants at 3S Ready Mix, to get their judgments' about the questionnaire, check appendix 1. As their results represent the required inputs to develop an AHP model.

On the way to apply this AHP model to SC, first, it has to develop the hierarchical structure of the AHP model. Second, it has to use of AHP model to establish priorities for the criteria, this step includes: developing pairwise comparisons, establish a pairwise comparison matrix, synthesization, and consistency.

The following Figure (3) presents the hierarchical structure of AHP model; which will be applied to only identify the relative importance of each criterion in terms of its contribution to the accomplishment of the company's overall goal.

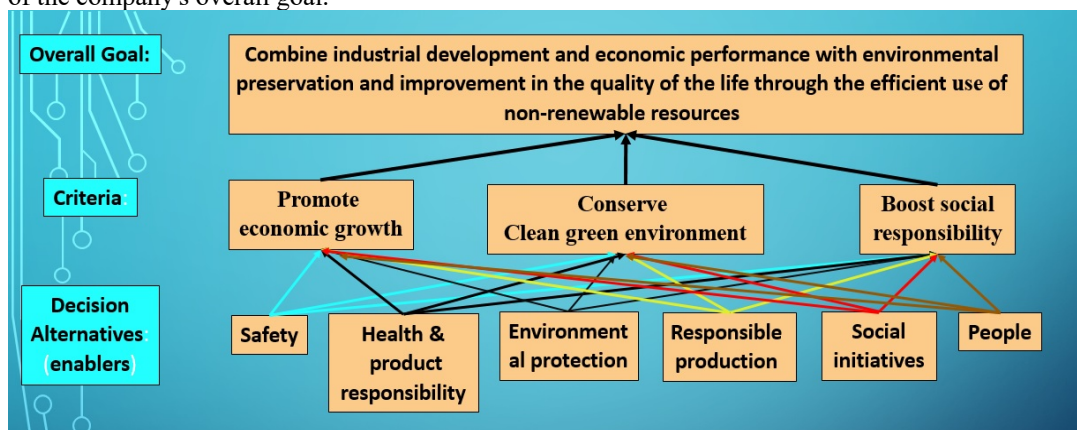


Figure 3. The hierarchical structure of the AHP Model

The use of the AHP model to establish priorities for the criteria

AHP model uses pairwise comparisons prepared according to decision-maker opinion to develop priorities for the criteria.

Develop pairwise comparisons

Pairwise comparisons represent the main building block of AHP. To develop priorities for the three criteria, the decision-maker has to determine how important each criterion relative to each other when two criteria are compared with each other. Then, express his judgment with numerical rating as shown in Table (1).

Table 1. Comparison scale for the importance of criteria and decision alternatives using AHP

Verbal Judgment	Numerical Rating
Extremely more important	9
	8
Very strong more important	7
	6
Strongly more important	5
	4
Moderately more important	3
	2
Equally important	1

The AHP model has the flexibility to accommodate the decision-makers judgments.

Establish a pairwise comparison matrix

The next step is to develop a matrix based on decision makers' pairwise comparisons regarding the three criteria as follows in Table (2):

Table 2. Pairwise comparison matrix

	Economic	Environment	Social
Economic	1	2	2.5
Environment	0.5	1	2.25
Social	0.4	0.444	1

Synthesization

Based on the pairwise comparison matrix, the priority of the three criteria in terms of their contribution to achieving the overall goal can be calculated as shown in Table (3):

Table (3). The sum of each element

	Economic	Environment	Social
Economic	1	2	2.5
Environment	0.5	1	2.25
Social	0.4	0.444	1
Total	1.9	3.444	5.75

The next step is to calculate the relative weight of each element in the matrix and divide it by the total of each column; which is known as the normalized pairwise comparison matrix as shown in Table (4).

Table (4). The normalized pairwise comparison matrix

	Economic	Environment	Social
Economic	0.5263	0.5807	0.4347
Environment	0.2631	0.2903	0.3913

Social	0.2105	0.12903	0.1739
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Finally, the total average of the elements in each row represents the priority of each criterion as shown in Table (5)

Table (5). The priority of each criterion

	Economic	Environment	Social	Priority
Economic	0.5263	0.5807	0.4347	0.5139
Environment	0.2631	0.2903	0.3913	0.3149
Social	0.2105	0.12903	0.1739	0.1711

The synthesization of the AHP model provides the priority for each criterion in terms of their contribution in accomplishing the overall goal. The results show that considering governance and economic growth is the most important with priority 0.51 approximately, then environmental protection with the second priority 0.32 approximately, finally social responsibility with the third priority of 0.17 approximately.

Consistency

AHP presents a method for measuring the degree of consistency among several pairwise comparisons, through the calculation of the consistency ratio. If the results of the consistency ratio are greater than 0.10, it refers to inconsistency in pairwise judgments and the decision-maker has to review the pairwise comparisons. If the consistency ratio is 0.10 or less, this means the pairwise comparisons are consistent. **The first step** is to multiply the first column with the first priority, multiply the second column with the second priority, and the third column with the third priority.

$$\begin{aligned}
 &0.5139 \begin{bmatrix} 1 \\ 0.5 \\ 0.4 \end{bmatrix} + 0.3149 \begin{bmatrix} 2 \\ 1 \\ 0.444 \end{bmatrix} + 0.1711 \begin{bmatrix} 2.5 \\ 2.25 \\ 1 \end{bmatrix} \\
 &= 0.5139 \begin{bmatrix} 1 \\ 0.5 \\ 0.4 \end{bmatrix} + 0.6298 \begin{bmatrix} 2 \\ 1 \\ 0.444 \end{bmatrix} + 0.42775 \begin{bmatrix} 2.5 \\ 2.25 \\ 1 \end{bmatrix} = 1.57145 \\
 &0.25695 + 0.3149 + 0.3849 = 0.95675 \\
 &0.20556 + 0.1399 + 0.1711 = 0.51656
 \end{aligned}$$

The second step is to divide the weighted sum vector from step one by its related priority of each criterion

Economic $1.57145 / 0.5139 = 3.0578$
 Environmental $0.95675 / 0.3149 = 3.0382$
 Social $0.51656 / 0.1711 = 3.0190$

The third step is the average values of step 2 = $(3.0578 + 3.0382 + 3.0190) / 3 = 3.0383$

The fourth step is to calculate the consistency index = $(\text{average} - n) / (n - 1)$

CI = $(3.0383 - 3) / (3 - 1) = 0.01917$

The fifth and final step is to calculate the consistency ratio = CI / RI

Where N is the number of criteria and RI is the consistency index of a randomly generated pairwise comparison matrix. The value of RI depends on the number of items being compared; it represents the outcome of the table and is given as follows:

N	3	4	5	6	7	8
RI	0.58	0.90	1.12	1.24	1.32	1.41

Consistency ratio = $0.01917 / 0.58 = 0.033$

Since the consistency ratio is 0.033, it is less than 0.10, so the degree of consistency in the pairwise comparison matrix is acceptable.

5.2.3. The Identification of the Recommended Benchmark Indicators and Comparisons with the Key Performance Measures of SC Company.

Appendices (2), (3), and (4) present 197 benchmark indicators taken along the different governance & economic, environmental, and social aspects which were recommended by S&P/ EGX ESG in 2019, available at <https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-egx-esg->

index.pdf (July 15, 2020). Hence, we compare these 197 benchmark indicators with the key performance measures of SC in the years 2017, 2018, and 2019. The next step is to identify the total score along with each governance & economic growth, environmental, and social aspect. Finally, multiply the total score of each aspect with its relative weight, which is derived from the AHP model, to get the weighted score for each aspect solely.

The results derived from information in Appendix (2) indicate that there is positive progress in the company's overall governance and economic performance over the three years in comparison with the benchmark. Since the company undertakes several initiatives along with shareholder capital and rights, operational information, board and management information, board and management remuneration categories. However, there is no progress over business ethics categories. Finally, there is a decline in the company performance over financial information, corruption, and leadership categories. To sum up, various initiatives need more focus by the company to improve its overall governance and economic performance.

Whereas, the results obtained from the information presented in Appendix (3) show that there is favorable progress in the overall company environmental performance over the three years in comparison with best practice. For the reason that, the company considers more initiatives to be accomplished over both the environmental pollution and natural resource use categories which are reflected in an improvement in the company's overall performance in the environmental aspect over the three years with respect to the best practice.

Finally, the results from information as presented in Appendix (4) suggest that there is better progress in the company's overall social performance over the three years in comparison with the benchmark. As there is positive progress in the company performance in employees, labor rights, employee health and safety, customer outreach, and product quality categories in the years 2018 and 2019 to 2017. While, there are no progress in management policy, equal opportunity, and community investment categories. Whereas, the company neglects the union relations, human rights, product safety, and anti-trust categories. Therefore, the overall social performance of the company needs more attention and consideration to be enhanced.

6. The Proposed Model Results: Concluding Remarks

The results of the AHP model indicate that economic growth is the most important criteria and this result coincides with the current Egyptian economic conditions. As many companies suffer from the procedures taken by the Egyptian government regarding the reduction in energy subsidies and more than double fuel prices; which in turn forces the company to focus on economic growth to sustain its production. Then, the next is to consider the environmental aspect as this industry is considered one of the most polluting industries and the strict environmental regulations posed on them. So they have a great responsibility toward environmental protection. Finally, the social criterion achieves welfare of the society members. The results of applying the AHP model support that the various CSR aspects are shaped according to their strategic priorities in accomplishing the company's overall goal. Therefore, the company has to reallocate its resources to the various sustainability topics according to their relative importance in achieving the Company's overall goal. Despite dealing with these various topics in an equally important manner which results in misallocation and waste of company resources.

The next step is the identification of the KPIs, recommended by the S&P/EGX ESG index and compares them with the performance measures used by the Company to assess its performance over the years 2017, 2018, and 2019 along with the governance & economic, environmental, and social aspects. This step is vital as it measures the company's progress in each aspect separately. Consequently, the results show that SC Company performance in the three aspects is proximate moderate. Also, there is better progress in these aspects through 2019, 2018 as compared with 2017. Besides, the benchmark index highlights the various areas which were well implemented and highlights the various areas that were neglected by SC. The previously displayed self-tailored model presents an intelligent avenue that helps SC to identify the combination of CSR performance measures that impact the various governance & economic, environmental, and social aspects. So this model can identify SC's contribution towards sustainability. Therefore, the researchers develop the following report, as shown in Figure (4) to summarize the main results of the model during the years 2017, 2018, and 2019 which is called the sustainability outcomes report of SC.

SC Group			
Date			
To whom it may concern			
Sustainability Outcomes Report			
Through the clear analysis of CSR performance data presented in the SC annual report published on the Company website for years 2017, 2018 & 2019 and the KPIs recommended by the best practices depicted in the S&P/EGX ESG index, the sustainability results were highlighted and the following results were derived.			
The weighted score for the aspect	The year 2017	The year 2018	The year 2019
Governance & Economic	18%	23%	25%
Environmental	14%	17%	20%
Social	6%	8%	9%
According to the previously displayed results, there is positive progress in the governance & economic, environmental, and social performance of SC Company during 2019, 2018 as compared to 2017.			
- The strengths in the governance & economic aspect:			
SC undertakes numerous initiatives that sustain and improve its governance and economic condition. For illustration, the number and the par value of ordinary shares disclosed, the description of share classes provided, the contents of code of best practices, the existence and contents of a code of business conduct, the changes in the company's articles of association, accounting policy and accounting standards, the auditor report, method of asset valuation and asset depreciation, discussion of corporate strategy, trends in the industry, the list of board members and audit committee, the board meets more than 4 times per year, the publication of CSR report.			
-The strengths in the environmental aspect:			
SC considers several initiatives that maintain and strengthen its environmental situation. For example, the continuous measurement of the different types of emissions, intelligent use of renewable resources, adoption of energy-saving solutions, defined targets related to emissions, efficient ways to improve material usage, recycling, and rational water consumption.			
-The strengths in the social aspect:			
There is better progress in the social performance during 2019, 2018 as compared to 2017. Since SC implements various initiatives that conserve and forte its social situation. For instance, management systems in all plants and 100% ISO 14001 and recently OHSAS 18000 certification, Preservation of biodiversity, employee engagement in decision making, various types of donations, strict policies to protect human rights, health, safety, and community investment and adherence to laws and standards.			
However, the benchmark index uncovers various weaknesses areas along with the various governance & economic, environmental and social aspects which were largely neglected by SC.			
-The weaknesses in the governance & economic aspect:			
The company has to consider and disclose various initiatives, for example, the number of preferred shares disclosed, the way shareholders nominate directors to the board, the existence of a review of the last shareholders meeting, a detailed earnings forecast, audit and non-audit fees paid to the auditor, output in physical terms, details about the chairman, compensation committee, policy on insider trading, CSR report audited or independently assured. All these areas need to be highlighted.			
-The weaknesses in the environmental aspect:			
Concerning the environmental aspect, information about the physical and regulatory risks associated with climate change, clear information regards ozone-depleting substances, defined targets relating to emissions, the impact of the transportation system adopted by SC on the environment, and information about the total amount of water used. These areas need more attention			
- The weaknesses in the social aspect:			
For the social aspect, information about the product life cycle, Product safety, product quality, union relations, information about the degree of customer satisfaction, customer awareness programs, education, clear procedures for protecting customer privacy and their rights, information addressing human rights, and policy for employee profit-sharing. These initiatives need more emphasis.			
-Suggestions for SC Company to improve its overall governance & economic, environmental, and social performance:			
SC has to consider the various neglected initiatives to improve its overall governance & economic, environmental, and social performance. As well as, SC has to disclose the unfavorable issues that negatively impact its overall performance. Besides, it has to search for a suitable method to weigh the different CSR aspects, instead of mistakenly dealing with them. Therefore, SC has to consider the above-discussed issues to advance its governance & economic, environmental, and social			

performance and to be one of the listed companies in the S&P/EGX ESG Index, and then demonstrates its leadership in dealing with various sustainability issues.

Figure 4: Sustainability outcomes report.

Source: The researchers

From the practical point of view, the report briefly discusses the various areas that need heavy improvement through the provision of comparative information displayed at key performance measures level. These highlighted sustainability outcomes may positively contribute to enhanced CSR performance. Then, the company has to disclose the resulting information in a high-quality CSR section in the annual report. Consequently, this report provides a complete transparent picture reflecting the relevant CSR topics to the different stakeholders to enable them to make future useful decisions regarding the design of the optimal mix of sustainable performance measurement and management practices.

The Challenges to Model Application:

First, the AHP model is not applied to the people of SC Company, which is the target company. Therefore, this model seeks opinions of 3S Ready Mix Company, which is one of the clients of SC, also 3S Ready Mix works in the same sector. The benefit from getting their judge that they free to provide answers to the questions, hence their answers are free from bias.

Second, AHP has a shortcoming presented in the difficulty in maintaining consistency among responses. However, in this research, the numbers of criterion are limited to three. Subsequently, this permits simplicity in maintaining the consistency, and it is supported by the results of the consistency test undertaken during the model implementation.

Third, this model is applied to SC only for three years from 2017 to 2019, because this research implemented a case study method. But, this model is flexible and simple to adapt to various forms of companies, also it can be easily applied to various companies that belong to different sectors.

Fourth, this model needs to be continuously updated. Because it depends on decision makers' judgments' that need further modification, also the progress and the deterioration in the company's CSR performance should be constantly reflected in the checklist.

Fifth and last, before model implementation, SC does not have a clear picture regarding its overall CSR performance to identify the areas of strengths, weakness, and opportunities for improvements. After the model implementation, the company gains a complete picture that enables it to compare and measure its CSR performance with respect to the best practice presented in S&P/EGX ESG Index. Therefore, it can easily track, measure, control, and disclose its overall CSR performance. In addition, the results of the model act as radar that provides red light on the areas of inefficiencies that need further improvements.

7. Conclusions

The CSR concept includes various initiatives taken along different economic, environmental, and social perspectives. These perspectives that represent the building blocks of the CSR concept should be tailored to meet society's needs. This means the CSR concept has various perspectives or aspects which are globally accepted by all companies. However, companies in certain countries should consider undertaking a set of CSR activities that cope with their own society's needs. Hence, the AHP model can prioritize the various CSR activities undertaken by the companies, along with the different CSR dimensions according to their strategic importance in meeting local society requirements. In addition, the identification of the recommended KPIs based on the S&P/EGX ESG index and comparing them with the company's key performance measures enables companies to get a completely clear picture and benchmark their CSR performance along each CSR aspect solely. So, this research developed a proposed model that incorporates both the weights derived from the AHP model and offers comparisons of the company's CSR performance with the benchmark index and practically implements it in SC. Hence, the proposed model identifies and quantifies the environmental and social conduct of SC through the provision of comparative information across years 2017, 2018 & 2019 and with the benchmark at the KPIs level. Consequently, the results of the proposed model were highlighted in the sustainability outcomes report. Therefore, this report can shed light on the efficiencies and inefficiencies in its CSR performance. Hence, it points to areas ripe for intense improvement and transparently communicates the results of its performance. In conclusion, the resulting coherent sustainability commitment reshaped reality to a more detailed extent to various stakeholders, thus contributed to a never-ending journey of continuous improvement in the company performance and also contributed to the achievement of sustainable development as an end vision.

Future research can structure the AHP model based on other stakeholders' perceptions as CEO, the managers, and the employees at SC, government, and the general public. Those stakeholders may provide different ranks to various CSR initiatives. Other researchers may focus on CSR practices in the supply

chains. The research recommends the S&P/EGX ESG index setters to include more indicators that reflect continuous education and training programs to employees. In addition, the index setters have to classify the KPIs into general KPIs and sectors' specific KPIs, where "one size does not fit all". This is because each company has different economic, environmental, and social impacts according to the type of industry to which this company belongs.

References

- Alshbili, I., Elamer, A. A., & Beddewela, E. (2019). Ownership Types, Corporate Governance and Corporate Social Responsibility Disclosures: Empirical Evidence from a Developing Country. *Accounting Research Journal*, 33(1), 148–166.
- Asif, M., Searcy, C., Zutshi, A., & Fisscher, O. A. M. (2013). An Integrated Management Systems Approach to Corporate Social Responsibility. *Journal of Cleaner Production*, 56, 7–17.
- Babiak, K., & Trendafilqva, S. (2011). CSR and Environmental Responsibility: Motives and Pressures to Adopt Green Management Practices. *Corporate Social Responsibility and Environmental Management*, 18 (March), 11–24.
- Barnett, M. L. (2007). Stakeholder Influence Capacity and The Variability of Financial Returns to Corporate Social Responsibility. *Academy of Management Review*, 32(3), 794–816.
- Burton, B. K., Farh, J.-L., & Hegarty, W. H. (2000). A cross-Cultural Comparison of Corporate Social Responsibility Orientation: Hong Kong vs. United States Students. *Teaching Business Ethics*, 4, 151–167.
- Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility : Toward the Moral Management of Organizational Stakeholders. *Business Horizons*, July-August, 39–48.
- Cronje, F., & Wyk, J. Van. (2013). Measuring Corporate Personality with Social Responsibility Bench Marks. *Journal of Global Marketing*, 4(2), 188–243.
- Dixon-Ogbechi, B. N., & Jagun, S. O. (2013). Application of Analytic Hierarchy Process to Determine Consumers' Perceptions of Corporate Social Responsibility Strategy for Organizations in the Nigerian Global System for Mobile Telecommunication Industry. *Journal of Management and Strategy*, 4(4), 44–51.
- Halimoen, F., Syahrin, A., & Mawengkang, H. (2015). Corporate Social Responsibility Program Toward Sustainability Crude Palm Oil Industry Using Analytic Hierarchy Process. *International Research Journal of Engineering and Technology*, 2(6), 1203–1209.
- Husted, B. W., & Allen, D. B. (2006). Corporate Social Responsibility in the Multinational Enterprise : Strategic and Institutional Approaches. *Journal of International Business Studies*, 37, 838–849.
- Kelly, M., & Alam, M. (2008). Management Accounting and the Stakeholder Value Model. *Journal of Applied Management Accounting Research*, 6(1), 75–86.
- Maignan, I., & Ferrell, O. C. (2004). Corporate Social Responsibility and Marketing : An Integrative Framework. *Journal of the Academy of Marketing Science*, 32(1), 3–19.
- Maignan, I., & Ralston, D. A. (2002). Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses' Self-Presentations. *Journal of International Business Studies*, 33(3), 497–514.
- Matten, D., & Moon, J. (2008). “ Implicit ” and “ Explicit ” CSR : A Conceptual Framework for A Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33(2), 404–424.
- Nicolae, J. C., & Sabina, J. M. (2010). Dimensions and Challenges of Social Responsibility. *Annales Universitatis Apulensis Series Oeconomica*, 12(1), 238–248.
- Orpen, C. (1987). The Attitudes of United States and South African Managers to Corporate Social Responsibility. *Journal of Business Ethics*, 6(2), 89–96.
- Rinaldi, L. (2019). Accounting for Sustainability Governance: The Enabling Role of Social and Environmental Accountability Research. *Social and Environmental Accountability Journal*, 39(1), 1–22.
- Saaty, T. L. (1990). How to Make a Decision: The Analytic Hierarchy Process. *European Journal of Operational Research*, 48, 9–26.
- Saaty, T. L. (2008). Decision Making with the Analytic Hierarchy Process. *International Journal of Services Sciences*, 1(1), 83–98.
- Said, R., Zakaria, S. F., Syed-Noh, S. N., Sidek, N. Z. M., & Ahmad, A. R. (2016). Community-Centric Corporate Social Responsibility (CSR) initiatives of takaful industries: An analytic hierarchy process (AHP) approach. In *Social Sciences (Pakistan)*, 11(17), 4155–4162.
- Song, B., & Kang, S. (2016). A Method of Assigning Weights Using a Ranking and Nonhierarchy Comparison. *Advances in Decision Sciences*, 1–9.
- Stuebs, M., & Sun, L. (2015). Corporate Governance and Social Responsibility. *International Journal of Law and Management*, 57(1), 38–52.
- Welford, R. (2005). Corporate Social Responsibility in Europe, North America and Asia. *The Journal of*

Corporate Citizenship, 17, 33–52.

Alshbili, I., Elamer, A. A., & Beddewela, E. (2019). Ownership Types, Corporate Governance and Corporate Social Responsibility Disclosures: Empirical Evidence from a Developing Country. *Accounting Research Journal*, 33(1), 148–166.

Asif, M., Searcy, C., Zutshi, A., & Fisscher, O. A. M. (2013). An Integrated Management Systems Approach to Corporate Social Responsibility. *Journal of Cleaner Production*, 56, 7–17.

Babiak, K., & Trendafilqva, S. (2011). CSR and Environmental Responsibility: Motives and Pressures to Adopt Green Management Practices. *Corporate Social Responsibility and Environmental Management*, 18(March 2010), 11–24.

Barnett, M. L. (2007). Stakeholder Influence Capacity and The Variability of Financial Returns to Corporate Social Responsibility. *Academy of Management Review*, 32(3), 794–816.

Burton, B. K., Farh, J.-L., & Hegarty, W. H. (2000). A cross-Cultural Comparison of Corporate Social Responsibility Orientation: Hong Kong vs. United States Students. *Teaching Business Ethics*, 4, 151–167.

Carroll, A. B. (1991). The Pyramid of Corporate Social Responsibility : Toward the Moral Management of Organizational Stakeholders. *Business Horizons*, July-August, 39–48.

Cronje, F., & Wyk, J. Van. (2013). Measuring Corporate Personality with Social Responsibility Bench Marks. *Journal of Global Marketing*, 4(2), 188–243. <https://doi.org/10.1108/JGR-03-2012-0010>

Dixon-Ogbechi, B. N., & Jagun, S. O. (2013). Application of Analytic Hierarchy Process to Determine Consumers' Perceptions of Corporate Social Responsibility Strategy for Organizations in the Nigerian Global System for Mobile Telecommunication Industry. *Journal of Management and Strategy*, 4(4), 44–51.

Halimoen, F., Syahrin, A., & Mawengkang, H. (2015). Corporate Social Responsibility Program Toward Sustainability Crude Palm Oil Industry Using Analytic Hierarchy Process. *International Research Journal of Engineering and Technology*, 2(6), 1203–1209.

Husted, B. W., & Allen, D. B. (2006). Corporate Social Responsibility in the Multinational Enterprise : Strategic and Institutional Approaches. *Journal of International Business Studies*, 37, 838–849.

Kelly, M., & Alam, M. (2008). Management Accounting and the Stakeholder Value Model. *Journal of Applied Management Accounting Research*, 6(1), 75–86.

Maignan, I., & Ferrell, O. C. (2004). Corporate Social Responsibility and Marketing : An Integrative Framework. *Journal of the Academy of Marketing Science*, 32(1), 3–19.

Maignan, I., & Ralston, D. A. (2002). Corporate Social Responsibility in Europe and the U.S.: Insights from Businesses' Self-Presentations. *Journal of International Business Studies*, 33(3), 497–514.

Matten, D., & Moon, J. (2008). “ Implicit ” and “ Explicit ” CSR : A Conceptual Framework for A Comparative Understanding of Corporate Social Responsibility. *Academy of Management Review*, 33(2), 404–424.

Nicolae, J. C., & Sabina, J. M. (2010). Dimensions and Challenges of Social Responsibility. *Annales Universitatis Apulensis Series Oeconomica*, 12(1), 238–248.

Orpen, C. (1987). The Attitudes of United States and South African Managers to Corporate Social Responsibility. *Journal of Business Ethics*, 6(2), 89-96.

Rinaldi, L. (2019). Accounting for Sustainability Governance: The Enabling Role of Social and Environmental Accountability Research. *Social and Environmental Accountability Journal*, 39(1), 1–22.

Saaty, T. L. (1990). How to Make a Decision: The Analytic Hierarchy Process. *European Journal of Operational Research*, 48, 9–26.

Saaty, T. L. (2008). Decision Making with the Analytic Hierarchy Process. *International Journal of Services Sciences*, 1(1), 83–98.

Said, R., Zakaria, S. F., Syed-Noh, S. N., Sidek, N. Z. M., & Ahmad, A. R. (2016). Community-Centric Corporate Social Responsibility (CSR) initiatives of takaful industries: An analytic hierarchy process (AHP) approach. In *Social Sciences (Pakistan)*, 11(17), 4155–4162.

Song, B., & Kang, S. (2016). A Method of Assigning Weights Using a Ranking and Nonhierarchy Comparison. *Advances in Decision Sciences*, 1–9.

Stuebs, M., & Sun, L. (2015). Corporate Governance and Social Responsibility. *International Journal of Law and Management*, 57(1), 38–52.

Welford, R. (2005). Corporate Social Responsibility in Europe, North America and Asia. *The Journal of Corporate Citizenship*, 17, 33–52.

Appendix 1

Questions Directed to the Experts in 3S Ready Mix Concrete

Name:

Current position:

Email Address:

Note: if it is difficult to provide specific answer, please provide us with approximately the best possible answer.

The overall goal of SC Company is to combine industrial development and economic performance with environmental protection and improvement in the quality of life through the efficient use of non-renewable resources. The three criteria which are: promote economic growth, conserve clean green environment, and boost social responsibility each one contributes to the achievement of the overall goal. In each comparison below, after your Excellency select the more important criteria according to your own personal judgments. Please express your judgments regarding the relative importance of the selected criteria depending on the following numerical rating that ranges from 1 to 9

Verbal judgement	Numerical rating
Extremely more important	9 8
Very strong more important	7 6
Strong more important	5 4
Moderately more important	3 2
Equally important	1

Please state how important each criterion is relative to each other in respect of achievement SC overall goal, when two criteria are compared according to the following table.

Pairwise comparison	Which is more important criterion than the other?	Numerical rating
Economic Aspect-Environmental Aspect	For example: environment	For example: 5
Economic Aspect-Environmental Aspect		
Economic Aspect –Environmental Aspect.		
Economic Aspect – Social Aspect.		
Environmental Aspect – Social Aspect.		

Appendix 2

The weighted score for governance & economic aspect based on SC performance during the years 2017, 2018 & 2019 using S&P/EGX ESG Index

The governance & economic aspect	The recommended performance indicators offered to this aspect	2017	2018	2019
Shareholder capital	The number of issued and outstanding ordinary shares disclosed.	√	√	√
	The number of issued and outstanding other shares disclosed.			
	The par value of each ordinary share is disclosed.	√	√	√
	The identity of the largest shareholder.	√		√
	The identity of holders of all large stakes.	√		√
	The identity of shareholders holding at least 25% of voting shares.			
	The identity of shareholders holding at least 50% of voting shares.			
	The identity of shareholders holding at least 75% of voting shares.			
	The number and identity of shareholders each holding more than 10%.		√	√
	Shareholding in the company by individual senior managers.			
	Shareholding in the company by individual directors.			

	The description of share classes is provided.		√	√
	A review of shareholder by type			
	Cross-ownership	√	√	√
	The company's articles of association or by-laws are accessible over the web.	√	√	√
The total company performance in the shareholder capital category.		6	6	8
Shareholder rights	The content of any corporate governance charter or code of best practices.		√	√
	Existence of a code of business conduct and ethics.	√	√	√
	The content of the code of business conduct and ethics.		√	√
	The changes in the company's articles of association.	√	√	√
	The existence of voting rights for each voting and non-voting share.			√
	The transparency of the way that shareholders nominate directors to the board.			
	The transparency of the way by which shareholders convene an extraordinary general meeting.	√	√	√
	The transparency of the procedure for initiating inquires with the board.			
	The transparency of the procedure for putting forward proposals at shareholders' meetings.	√	√	√
	A formalized dividend policy.	√	√	√
	The existence of a review of the last shareholders' meeting.			
	Full general shareholders meeting minutes.			
	The existence of a calendar of important shareholders dates			
The total company's performance in the shareholder rights category.		5	7	8
Financial information	The company's accounting policy.	√	√	√
	The accounting standards it uses for its accounts.	√	√	√
	Whether the accounts meet local accounting standards.	√	√	√
	Annual financial statements according to internationally recognized accounting standards.			
	Notes to annual financial statements according to IFRS/U.S GAAP.			√
	Independent auditor report according to IFRS/U.S GAAP.			
	Unqualified audit opinion with regard to annual financial statements according to IFRS/U.S GAAP.			
	Disclosure of related party transactions (RPT _s).	√	√	√
	The indication that RPT _s are made on the market or non-market terms.	√	√	√
	Interim financial statements according to IFRS/U.S GAAP.			

	Notes to financial statements.	√	√	√
	Whether these financial statements are audited or at least reviewed.	√	√	√
	A basic earnings forecast of any kind			
	A detailed earnings forecast.			
	Financial information on a quarterly basis.	√	√	√
	Segment analysis.	√	√	√
	Revenue structure.	√	√	√
	Cost structure.	√	√	√
	The name of the company's auditing firm.	√	√	√
	A copy of the auditor's report.	√	√	√
	How much the company pays in audit fees to the auditor.			
	Non-audit fees are paid to the auditor.			
	Whether there are consolidated financial statements or whether only the parent or holding company is audited.	√	√	√
	Methods of asset valuation.	√	√	√
	Information about the method of calculating fixed-asset depreciation.	√	√	√
	A list of affiliates in which the company holds a minority stake.			√
	The ownership structure of affiliates.	√	√	√
	The company's independent auditor reports directly to an independent audit committee.	√	√	√
	An auditor does not also provide non-audit services greater in value than 25% of total audit fees.			
	An auditor does not provide any non-audit services.			
	The total company's performance in the financial information category.	18	18	20
Operational information	Disclosure of the kind of business the company engages in.	√	√	√
	Output in physical terms.			
	Characteristics of fixed asset employed.	√	√	√
	Efficiency indicators.	√	√	√
	Any industry-specific ratios.	√	√	√
	A discussion of corporate strategy.		√	√
	Any plans for investment in the coming years.	√	√	√
	Detailed information about investment plans in the coming years			
	An output forecast of any kind.	√	√	√
	An overview of trends in its industry		√	√
	The market share for any or all of the company's businesses.	√	√	√
	The total Company's performance in the operational information category.	7	9	9
Board and management information.	The list of board members.	√	√	√
	Details about directors other than name and title.			
	Details about other employment and position of independent directors.			
	Details about the directors' previous employment and positions.			

	When each director joined the board.			
	A named chairman listed	√	√	√
	Details about the chairman, other than name and title			
	Details about the role of the Board of Directors at the company.		√	√
	A list of matters reserved for the board.		√	√
	A list of board committees		√	√
	Names of all members of each existing committee.		√	√
	Whether there are internal audit functions besides the Audit Committee.			
	The attendance record for board meetings.			
	The list of senior managers not on the Board of Directors.	√	√	√
	The backgrounds of senior managers			
	The non-financial details of the CEO's contract.			
	The number of shares held in other affiliated companies by managers.			
	Independent directors constitute more than 33% of the board.			
	Independent directors constitute more than 50% of the board.			√
	Independent directors constitute more than 67% of the board.		√	
	The board size is no less than 7 and no more than 18.	√	√	√
	CEO and Chair are not the same person.	√	√	√
	Voting in AGM's takes place by poll rather than a show of hands.			
	The audit Committee is over 50% independent.			
	The audit Committee is over 66% independent.			
	The audit Committee is 100% independent.		√	√
	The nomination or governance committee is over 50% independent.			
	The nomination or governance committee is at least 66% independent.			
	The nomination or governance committee is 100% independent.			
	The compensation committee is over 50% independent.			
	The compensation committee is at least 66% independent.			
	The compensation committee is 100% independent.			
	A risk management committee exists at the board level.	√	√	
	No directors sit on more than 3 other public company boards.			
	All board members have attended more than 75% of board meetings.			
	All board members have attended more than 90% of board meetings.			
	Board conducts regular self-evaluation.			

	Independent board members regularly meet together independently of the company's executive management.			
	Board meets more than 4 times per year.			√
The total company's performance in the board and management information category.		6	12	12
Board and management remuneration	The decision-making process for director's pay.			
	The specifics of directors' pay, including the salary levels.	√	√	
	The form of directors' salaries, such as whether they are in cash or shares			
	The decision-making process for determining managerial pay.			
	The specifics of senior management pay, such as salary level or bonus.			√
	Performance-related indicators guiding senior management compensation.		√	√
	Board has a formal training program for directors or provides external training.			
The total company's performance in the board and management remuneration category.		1	2	2
Corporate governance	Policy and procedures on whistleblowing			
	Policy and procedures on insider trading			
	Contribution to political parties.			
The total company's performance in the corporate governance category.				
Corruption	Disclosure on policy and procedures on bribery and corruption.		√	
The total company's performance in the corruption category.		0	1	0
Leadership	Stated commitment to recognize corporate responsibility standards.			
	CEO statement regarding corporate governance.			
	CEO statement regarding corporate responsibility/CSR.	√	√	√
	Signatory to recognized global CSR conventions.	√		
The total company's performance in the leadership category.		2	1	1
Business Ethics	Publication of CSR report.	√	√	√
	CSR report audited or independently assured.			
	The report under the GRI framework.			
	Social and environmental performance in operational MD&A or operational analysis.		√	√
The total company's performance in the business ethics category.		1	2	2
The overall score of company performance in the governance and economic aspect.		46	58	62
The total percentage of company performance in governance and economic the aspect.		46/ 127= 36%	58/ 127= 46%	62/ 127= 49%
The weighted score of company performance in governance and economic aspect.		36%* 51% =18%	46%* 51% =23%	49%*51%= 25%

Appendix 3

The weighted score for environmental aspect based on SC performance during years 2017, 2018 & 2019 using S&P/EGX ESG Index.

The environmental aspect.	The recommended performance indicators are offered to this aspect.	2017	2018	2019
Environmental pollution	Emissions of greenhouse gases.	√	√	√
	Emissions of ozone-depleting substances.			
	NO _x , SO _x , and other emissions.	√	√	√
	Physical or regulatory risks associated with climate change.			
	Policy on management of emissions or regulatory risks associated with climate change.	√	√	√
	Defined targets relating to emission.			√
	A committed carbon credit program.			
The total company performance in the environmental pollution category.		3	3	4
Natural resources use	Energy consumption is broken down by primary energy sources.			
	Use of renewable resources of energy.		√	√
	Total energy saved due to conservation and efficiency improvement.	√	√	√
	Initiatives to reduce energy consumption or energy audit.	√	√	√
	Defined targets relating to energy conservation.	√	√	√
	Types of raw materials used.			√
	Percentage of materials used that are recycled.	√		√
	Initiatives to improve the efficiency of material usage.	√	√	√
	Policies/Initiatives for management of water use.	√	√	√
	Total water used.			
	Total water used by the source.			
	Policy/Initiatives were taken for the management of hazardous waste.		√	
	Policy for management of (waste) water discharged.			
	Production of energy-efficient products.		√	√
The total company performance in the natural resources used category.		6	8	9
The overall score of company performance in the environmental aspect.		9	11	13
The total percentage of company performance in the environmental aspect.		9/21= 43%	11/21= 52%	13/21= 62%
The weighted score of company performance in the environmental aspect.		43%* 32%= 14%	52%* 32%= 17%	62%* 32%= 20%

Appendix 4

The weighted score for social aspect based on SC performance during years 2017, 2018 & 2019 using S&P/EGX ESG Index

The social aspect.	The recommended performance indicators are offered to this aspect.	2017	2018	2019
Management policy and performance indicators	Information relating to the product life cycle.			
	Incidents of, and fines or non-monetary sanctions for, non-compliance with applicable environmental regulations.	√	√	√
	Environmental impact of the type of transportation used for logistical purposes.			
	Explicit environmental policy.	√	√	√

	Efforts to preserve biodiversity (e.g. plantation of trees).	√	√	√
	Management system/ Certification regarding environmental practices (that is status on ISO 14001 certification).	√	√	√
	Policy on disaster management.			
	EMS in all locations/facilities and 100% ISO 14001 certification.	√	√	√
The total company performance in management policy and performance indicators category.		5	5	5
Employees	Programs for career development.		√	√
	Initiatives to involve employees in decision making (including intra-management level communication etc.).		√	√
	Information on policy/rules relating to non-financial benefits to employees (including housing etc.)		√	√
	Information on policy/rules relating to healthcare.	√	√	√
	Policy/ Rules relating to employee separation and lay off.		√	√
	Policy/Rules for profit sharing (stock options etc.) with lower management/employee.			
The total company performance in the employees' category.		1	5	5
Labor rights	Management system/certification regarding employment and labor practices (that is status on SA 8000 certification).			
	Policy on code of conduct for protecting human rights.		√	√
	Initiatives to enforce the above policy.		√	√
	The number of strikes/ lockouts and the number of employees involved.			
	SA 8000 certification at all locations/ facilities.			
	Reference to ILO core convention in code of conduct.			
	Code of conduct applies to the supply chain as well.	√	√	√
The total company performance in the labor rights category.		1	3	3
Employee health and safety.	Explicit health and safety policy.	√	√	√
	Incidents of work-related injury/ accidents.	√	√	√
	Initiatives on employee health and safety.	√	√	√
	Dissemination of health-based knowledge and training including awareness about HIV/AIDS.			
	Management system/ Certification regarding health and safety practices (that is status on OHSAS 18000 certification).		√	√
	OHSAS 18000 certification at all locations/facilities.		√	√
The total company performance in employee health and safety.		3	5	5
Equal opportunity	Explicit statement about equal opportunity employer (gender, caste, religion, etc.).			
	The gender breakdown of the total workforce.			
	The number of employees by ethnicity or caste.			
	Initiatives for promoting employment of women and/ or disabled.			
	Policy on discrimination in employment/treatment of employees affected with HIV aids.			
	Policy/Rules to address the incidence of sexual harassment and recourse.			
	The Board of Directors has an independent women director.	√	√	√
The total company performance in the equal opportunity category.		1	1	1
Union relations	Number or percentage of unionized employees.			
The total company performance in the union category.		0	0	0
Human rights	Policy or code of conduct on addressing human rights (e.g. child labor, forced labor, bonded labor, etc.)			

The total company performance in the human rights category.		0	0	0
Community investment	Explicit policy/statement regarding community investment.	√	√	√
	Initiatives on community awareness or education.	√	√	√
	Company participation in public-private initiatives for community development.	√	√	√
	Description/Amount of total contributions/ donations to charitable initiatives (health, education, etc.).	√	√	√
The total company performance in the community investment category.		4	4	4
Product safety	Policy/Procedures on recall of the product.			
The total company performance in the product safety category.		0	0	0
Anti-trust	The policy covering fair practices and monopolistic practices.			
The total company performance in the anti-trust category.		0	0	0
Customer outreach and product quality	Annual expenditure incurred on customer awareness initiatives.			
	The number of customer satisfaction surveys conducted in a year.			
	The mechanism for redressing grievances and feedback from the customer.			
	Policy/Procedures for the protection of customer confidentiality/privacy.			
	Procedures and programs for adherence to laws, standards, and voluntary codes related to marketing communications including advertising, promotion, and sponsorship.	√	√	√
	Policy/procedures on customer education regarding product/service provided.			√
	Management system/certification regarding product quality (status on ISO 9000/ Six sigma).	√	√	√
The total company performance in customer outreach and product quality category.		2	2	3
The overall score of SC Company performance in the social aspect.		17	25	26
The total percentage of SC Company performance in the social aspect.		17/49= 35%	25/49= 51%	26/49= 53%
The weighted score of SC Company performance in the social aspect.		35%* 17% = 6%	51%* 17%= 8%	53%* 17%= 9%