

ANLYSIS OF GREEN ACCOUNTING COST AND ITS EFFECT ON SUSTAINABLE PERFORMANCE: AN APPLIED STUDY

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Abstract

Green accounting important means used in the production of information that covers social and environmental dimensions of sustainable performance. The purpose of this research is to analyze the relationship and effect between measuring green accounting cost and sustainable performance, Baghdad Soft Drinks Company was selected as a sample because of the nature of the services it provides, which have a clear impact on the environment. Thus, the data collected from annual financial statements, reports for the year 2022. Data was analyzed using SPSS, the results showed strong, positive significant correlation and effect between independent variable with the dependent variable therefore, research recommends: should disclose the social and environmental costs and the indicators of triple bottom line model separately in the reports and financial statements.

Keywords: Green accounting cost, Sustainable performance, Triple Bottom Line model.

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1. INTRODUCTION

In recent times, green accounting considered a significant problem when viewed from an academic and organizational approach. during a short period, as several previously literature pointed (E.G. (Sadiku, Ashaolu, Adekunle, & Musa, 2021), (Yeasin, 2021), (Tui, 2015). The role of sustainability in multiple aspects of accounting. How can we better comprehend how sustainability fits into business performance measurement? To determine the response to this question, Fauzi et al. (Mahdi & Bashaye, 2019) have addressed how businesses could transform their sustainability performance in an efficient and methodical manner.

It is now obvious that a paradigm changes toward measuring sustainable performance is necessary; a new approach to describe a firm's sustainable performance is triple bottom-line model This approach or model (Fauzi, Goran, & Abdul Rahman, 2010), (Horneaux, da Silva Gabriel, & Gallardo-Vázquez, 2018),

(Chua, 2006), adds both environmental and social measurement to the conventional economic results in order to evaluate the success of an organization in a sustainable manner.

According to green accounting previous literature, we find that, for example (Ikpor, Enuma, & Okezie, 2019), (Deb, Saha, & Rahman, 2020), (Sanjeev & Chatteraj, 2020), (ENDIANA, DICRIYANI, ADIYADNYA, & PUTRA, 2020) and a number of researches referred to concept of Green accounting, importance and the key objectives behind implement this type of accounting, while the study of (Beredugo, 2014) Analyze the impact of green accounting costs on a company's financial performance using the multiple regression analysis and the data collected from (e.g. corporate social responsibility reports, sustainability reports, and financial statements).

Therefore, we can formulate the research methodology as follows.

1.1 Research problem

The problem of this research consists of the following points:

1. Is there a relationship between green accounting and sustainable performance by using Triple Bottom Line model in Baghdad Soft Drink Company?
2. Does Green accounting effect sustainable performance by using Triple Bottom Line model in Baghdad Soft Drink Company?

1.2 Research hypotheses

We suggest three primary hypotheses:

H1: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Economic dimension).

H2: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Environmental dimension).

H3: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Social dimension).

1.3 Research importance

Based on the Research problem, we can conclude the importance of this research.

The importance comes from the importance of its variables which include: green accounting as a major requirement for sustainability in the modern business environment and the importance of the TBL model as a contemporary vision for disclosing sustainable performance.

1.4 Research objectives

Finally, this research aims to discover the Relationship and effect between green accounting cost and sustainable performance through a set of indicators (measured by organizations. To do so, the tool for data collection was: for the green accounting used (social and environment costs), while sustainable performance measured by Triple Bottom Line model, respectively. The research sample: Baghdad Soft Drink Company in Iraq.

The study is organized as follows: Section Two summarizes the key ideas of (Green accounting, sustainable performance and the indicators), The research hypotheses come next. "In the part that follows, we outline the research methodology. We then go on show the statistical analysis that was done, talk about the findings, and provide conclusions and recommendations.

Nomenclature and Symbols list

GA - Green Accounting

TBL - Triple Bottom Line

2. GREEN ACCOUNTING AND SUSTAINABLE PERFORMANCE

Green accounting in accounting literatures refers normally to financial and non-financial aspects, Boyd, (Tui, 2015) refer various accounting levels, including) national accounting, financial accounting level, and the management accounting level, use the broad field of accounting known as "green accounting". Sadiku et al., (Sadiku, Ashaolu, Adekunle, & Musa, 2021) defines green accounting and focus on three dimensions: is a means of reduce environmental pollution as companies will be forced to place the costs related to environmental duty, Companies that adopt green accounting focus on (social (people), the environment (planet), and profit). Yeasin (2021), ANWAR (2018) link green accounting with the cost and strategy. the application of accounting that considers ecological costs, effects, and implications. It involves combining data that links the environment to the company's financial values, which will undoubtedly have a long-term impact on the association's financial and ecological strategy, in some sense (Bennett & James, 1998). An accounting system that calculates the present-day financial losses incurred by the environment's nonrenewable and renewable resources. All sectors of the economy can make well-

informed decisions that promote long-term sustainable development and uphold impacted human rights by factoring these losses into economic accounting at all levels.

In this context, sustainable performance can be measured using three fundamental elements according to the Triple Bottom Line approach. Some authors view Triple Bottom Line model (Endiana, Dicriyani, Adiyadnya, & Putra, 2020), (Beredugo, 2014), (Bennett & James, 1998), (Graff, Reiskin, White, & Bidwell, 1998), (Gray & Bebbington, 2000), and (Schaltegger, 2006). emerged as a new way to define an organization's sustainable performance since it became clear that a paradigm shift toward a sustainable performance measurement was required the Triple Bottom Line extends the usual economic results to include social and environmental factors in order to evaluate a company's performance from a sustainable standpoint, as seen before, Green accounting and Triple Bottom Line model use indicators they can be split into financial and non-financial aspects. From the introduction, this research will attempt to answer the following questions:

Q1: Is there a relationship between green accounting through (social and environmental costs) and sustainable performance by using Triple Bottom Line model in Baghdad Soft Drink Company (research sample)?

Q2: Does Green accounting through (social and environmental costs) effect sustainable performance by using Triple Bottom Line model in Baghdad Soft Drink Company (research sample)?

Table 1 summarized the measures used in research.

TABLE 1. MEASURES USED IN THE RESEARCH

No.	Variables	Indicator
1	Green Accounting cost	Amount of money by Iraq dinar spent on Social and Environmental
2	Sustainable performance	Triple Bottom Line model (TBL)

Source: Researcher

The next section reveals hypotheses and methodological aspects.

3. STUDY HYPOTHESES AND METHODOLOGY

This research aims to show relationship and effect of measuring cost of green accounting on sustainable performance in Baghdad soft drink. Co

Three hypotheses describe the relationship and effect of various types of indicators. These hypotheses: H1: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Economic dimension).

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H2: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Environmental dimension).

H3: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first-dimension sustainable performance approved in research (Social dimension).

Table 2 and 3 present measuring green accounting cost. The data related to Baghdad soft drink. Co listed in Iraq securities commission from annual reports, financial statement for the year 2022.

TABLE 2. COSTS THAT BAGHDAD SOFT DRINK INCUR ON ELEMENTS OF GREEN ACCOUNTING (SOCIAL COSTS)

No.		2022
1	Rewards	818343898
2	Retirement	1324011247
3	Healthy assurance	43890373
4	Workers' clothes	14332810
5	Developing the skills of employees	9855000
6	Transpiration of workers	21605885
7	Workers' food	0
8	Workers housing	0
9	Competitions and sports activities	0
TOTAL		2196100518

Source: Researcher

The social costs spent by the company are displayed in the table above, and these expenses are crucial for assessing the company's social responsibility to society. These factors will be taken into account when determining how much money the corporation spends on social components. It should be mentioned that the company is relatively dedicated to spending on social costs. Table 3 shows the element of Environmental Costs.

TABLE 3. COSTS THAT BAGHDAD SOFT DRINK INCUR ON ELEMENTS OF GREEN ACCOUNTING (ENVIRONMENTAL COSTS)

No.		2022
1	taxes	973257188
2	Licenses and subscriptions	81916398
3	Universities' scientific research	322821660
4	Repair and improvement of public spaces	281604875
5	Waste management	0
6	Avoid pollution the environment	0
Total		1659600121

Source: Researcher

The table above shows the company's environmental expenses. To determine the company's environmental responsibility to the environment, these costs are essential. These will serve as a benchmark for the total amount of money the company spends on environmental items.

The results for summarizing Triple Bottom Line model to Measuring sustainable performance are shown in Table 4.

TABLE 4. TRIPLE BOTTOM LINE MODEL IN BAGHDAD SOFT DRINK. CO

	Indicators	2022
Economic dimension	Retained economic value	94481232376
	Return on equity	4.821
	Return on assets	9.69
	Indicators	
Environmental dimension	Cost of raw material, Indirect materials and packaging materials	537857606826
	energy consumed	68
	Water consumption	39
	Waste production	17.87
	Emissions	150
	Indicators	
Social dimension	social costs for workers	16177492939
	Occupational health and safety	0.002
	Education and learning	3285
	Factory contribution with society	270788115
	Factory contribution to the product (responsibility)	3400186974

Source: Researcher

The aforementioned three-dimensional model is from the Baghdad Soft Drinks Company for the year 2022:

Economic dimension consists of a number of indicators that evaluate the direct financial effects of the company's activities.

Environmental dimension: It also features a number of indicators for the company' environmental preservation efforts.

Social dimension measures how much a company helps to promoting the good of society and protecting social rights.

4. STATISTICAL ANALYSIS AND DISCUSSION RESULTS

In this research, data were analyzed using SPSS, to test a hypothesis based on measures (Correlation and multiple regression analysis). The results are as follows.

4.1 Results of testing first hypothesis

Table 5 presents the Correlation and multiple regression analysis for the correlation and effect of the dimensions of green accounting cost with the first-dimension sustainable performance approved in research (Economic dimension).

TABLE 5. RESULTS OF TESTING FIRST HYPOTHESIS

Dependent variable	R	R ²	F	Sig	Degree of impact β		t	Significance level
Economic dimension	0.934	0.873	10.302	0.045	Social Costs	0.126	0.584	0.600
					Environmental Costs	0.89	4.131	0.026

Source: Researcher's Results

Table 5 above shows that the independent variable green accounting (Social, Environmental Costs) have significant positive correlation and effect with the dependent variable (Economic dimension), The correlation coefficient "R" was (0.934) at a level of significance (0.600), with the dimensions Social Costs which is higher than the level of significance approved by the research, which is (0.05), which means that there is positive correlation that is not significant. The level of significance for the environmental dimension (0.026) which is less than the level of significance approved by the research, which is (0.05), that means: there is positive correlation significant. The interpretation coefficient "R²" was (0.873), which explains the degree of influence of the independent variable "green accounting" of dimensions which are (Social, Environmental Costs), on first dimension sustainable performance approved in research, (Economic dimension), meaning that the independent variable was able to explain (0.873) percentage of the total variations of dependent variables (Economic dimension). According to the results of statistical analysis (0.127) of the variances are caused by other factors, and the value of degree influence of " β " on Social Costs reached (0.126), Environmental Costs (0.890), this means, one-degree increase in "green accounting" of dimensions which are (Social, Environmental Costs) "Economic dimension" is reflected in the dimensions of sustainable performance in Baghdad Soft Drink Company, with a value of (0.562) for the source of value dimension and (0.126) for Social Costs. And (0.890) for the Environmental Costs, which is the higher influential among the dimensions used in the research, and confirms the significance of this effect, that the value of the significance less is than the level of significance adopted in the research, which is (0.5), which means that there is a positive and significant effect, As a result, the first hypothesis of the research: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social , Environmental Costs) and the first dimension sustainable performance approved in research (Economic dimension). Accept.

4.2 Results of testing second hypothesis

Table 6 reports the results of Correlation and multiple regression analysis for correlation and effect of the dimensions of green accounting cost with the second-dimension sustainable performance (Environmental dimension) approved in the research.

TABLE 6. RESULTS OF THE TESTING SECOND HYPOTHESIS

Dependent variable	R	R ²	F	Sig	Degree of impact β		t	Significance level
Environmental dimension	0.95	0.902	9.232	0.098	Social Costs	0.164	0.727	0.543
					Environmental Costs	0.902	3.995	0.047

Source: Researcher's Results

Table 6 shows that strong significant positive correlation and effect relationship between "Environmental dimension" with dimensions of green accounting cost, (Social, Environmental Costs), The correlation coefficient "R" was (0.950) at a level of significance (0.543), with the dimensions Social Costs which is higher than the level of significance approved by the research, which is (0.05), which means there is positive correlation that is not significant. The level of significance for the environmental dimension (0.047) which is less than the level of significance approved by the research, which is (0.05), which means that there is positive correlation that is significant. The interpretation coefficient "R²" was (0.902), which explains the degree of influence of the independent variable "green accounting cost" of dimensions (Social, Environmental Costs), on second dimension for sustainable performance (Environmental) approved in the research, that means the independent variable was able to explain (0.902) percentage of the total variations of the dependent variables (Environmental dimension) According to the results of the statistical analysis (0.098) of the variances are caused by other factors. the value of degree influence of " β " on Social Costs reached (0.164), Environmental Costs (0.902), which means the one-degree increase in "green accounting" of dimensions which are (Social, Environmental Costs) "Environmental dimension" is reflected in the dimensions of sustainable performance in companies, with a value of (0.164) for Social Costs. And (0.902) for the Environmental Costs, which is the Larger influential among the dimensions used in the research, and confirms the significance of this effect, that the value of the significance Larger is than the level of significance adopted in the research, which is (0.5), which means that there is a positive and non-significant effect, As a result, the second hypothesis There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social, Environmental Costs) and the first dimension sustainable performance approved in research (Environmental dimension). Rejected.

4.3 Results of testing third hypothesis

Table 7 summarized the Correlation and multiple regression analysis for correlation and effect of the dimensions of green accounting cost and the Third-dimension sustainable performance (Social dimension) approved in the research. The results are presented in Table 7.

TABLE 7. RESULTS OF TESTING THIRD HYPOTHESIS

Dependent variable	R	R ²	F	Sig	Degree of impact β		t	Significance level
Social dimension	0.869	0.756	3.091	0.244	Social Costs	0.095	0.265	0.816
					Environmental Costs	0.845	2.365	0.142

Source: Researcher's Results

Table 7 shows that strong significant positive correlation and effect relationship between "Social dimension" and dimensions of green accounting cost, (Social, Environmental Costs), The correlation coefficient "R" was (0.869) at a level of significance (0.816), with the dimensions Social Costs higher than the level of significance approved by the research, which is (0.05), that means, there is positive correlation at a non-statistically significant. The level of significance for the environmental dimension (0.142) which is higher than the level of not significance approved by the research, which is (0.05), which means that there is positive correlation that is non-significant. The interpretation coefficient "R2" was (0.756), which explains the degree of influence of the independent variable "green accounting" of dimensions which are (Social, Environmental Costs), on Third dimension sustainable performance (Social dimension) approved in the research, , meaning that the independent variable was able to explain (0.756) percentage of the total variations of the dependent variables, which is (Social dimension) According to the results of the statistical analysis (0.244) of the variances are caused by other factors, as the value of degree influence of " β " on Social Costs reached (0.095), Environmental Costs (0.845), which means The one-degree increase in "green accounting" of dimensions which are (Social Costs, Environmental Costs) "Social dimension" is reflected in the dimensions of sustainable performance in companies, the research sample, with a value of (0.095) for Social Costs. And (0.845) for the Environmental Costs, which is the Larger influential among the dimensions used in the research, and confirms the significance of this effect, that the value of the significance Larger is than the level of significance adopted in the research, which is (0.5), which means that: there is a positive and non- significant effect, As a result, the Third hypothesis of this research: There is a correlation and effect, significant and statistical significance between the Measuring green accounting cost (Social , Environmental Costs) and the first dimension sustainable performance approved in research (Social dimension). Rejected.

5. CONCLUSIONS AND RECOMMENDATIONS

The conclusions from this research are the following. The concept of "green accounting" refers to both environmental and natural resource accounting. It is an accounting method that considers environmental concerns. The academic accounting sectors are giving it extraordinary attention. The performance measurement is multidimensional. In brief, for measuring, sustainability performance should exhibit

various facets and levels. because Efforts to promote social welfare generally, such as protecting natural resources, reducing poverty, and advancing education, are a focus of sustainability performance.

The result of the Statistical analysis by using (multiple correlation, multiple regression analysis, and test F) shows: very strong, positive significant correlation and effect between independent variable green accounting (Social, Environmental Costs) with the dependent variable (Economic dimension) of Baghdad Soft Drink Company as presented in Table 3 and 4, and Strong significant positive correlation and effect relationship between "Environmental dimension" with dimensions of green accounting cost, (Social, Environmental Costs). Table 5 shows the effect relationship as follow: (positive and non- significant effect). Finally Table 6 presents the strong significant positive correlation and effect relationship between "Social dimension" and dimensions of green accounting cost (Social, Environmental Costs) as well as, the effect relationship as follow: (positive and non- significant effect), as our results show, social and environment cost and a collection of metrics that, in accordance with the triple bottom line model, encompass the primary facets of sustainability performance Since most businesses still choose not to disclose or report in their financial statements, the following suggestions are now (imperatively) necessary:

1. Every organization should aggressively promote environmental awareness and underline the importance of pushing green accounting practices to the fore of accounting. Green accounting is a policy that is applicable globally. Green accounting ought to be taught in accounting courses.
2. The need to disclose the social and environmental costs and the indicators of triple bottom line model separately in the reports and financial statements in order to measure the cost of green accounting and apply the triple bottom line model easily.
3. To identify, allocate, and measure environmental and social costs affecting the business and to equip managers with approaches for managing the company's environmental, social, and economic performance, through developing specific indicators for each of the economic sectors.

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