

The Impact of Applying Environmental Accounting on the Sales of Economic Units

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Abstract

The objective of the study was to assess the impact of environmental accounting on of economic entities and to determine how it affects the increase in the sales economic entities, this information is used to help these entities manage their resources more effectively and demonstrate the necessity of environmental accounting. The investigation's sample was comprised of employees of commercial organizations, scholars and professionals. (100) The questionnaire was sent directly to a random subset of the research population. The primary takeaway is that environmental accounting has an effect on increasing the sales of economic entities and also provides an advantage for economic entities that can be used to gain a competitive advantage and have a sustainable growth.

Keywords: *Environmental Accounting, Economic Units, Commercial Organizations.*

Introduction

Environmental accounting is a new method of accounting that is expanding as the global community becomes more aware of environmental and sustainable development matters. This idea broadened the traditional concept of accounting by including environmental and social factors in the measurement and reporting of corporate performance. Unlike the traditional method of accounting, which only concerns itself with the financial aspects of things, environmental accounting takes into consideration the impact of economic entities' activities on the environment. The practice of environmental accounting is intended to provide stakeholders with more comprehensive information, this will enable them to make more environmentally responsible decisions and will also encourage economic entities to take responsibility for the effects they have on the environment. It's clearly understood that the implementation of environmental accounting has had a significant positive impact on economic entities, By including environmental factors in the accounting system, it increases the efficiency of resource utilization, reduces long-term expenses, improves the company's reputation, and has a positive impact on environmental protection. It facilitates the economic management of environmental risks, increases the utilization of resources, and has a larger impact on sustainable development. (Lestari: 430, 2024).

Research Methodology

Research Problem

Recently, the interest of scientists and researchers in environmental studies and finding solutions to these issues has increased. The difficulties associated with environmental accounting and the impact it has on financial performance are critical in the study of how to measure and effectively communicate the environmental impacts in order to support sustainability and responsible environmental management. Environmental accounting is crucial to financial performance, this is because it increases revenue and preserves the environment. As a result, the research question can be written as follows:

Does the application of environmental accounting lead to an increase and growth in the sales of economic entities?

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Research Objectives

The objective of the investigation is to assess the effect of environmental accounting on specific economic entities in general, and to test the impact of this on the sales growth of specific economic entities. This can facilitate the economic entities in managing their resources and demonstrating the importance of environmental accounting.

Research Hypotheses

There is a statistically significant relationship between the application of environmental accounting and economic unit sales.

There is a statistically significant effect of applying environmental accounting on the sales of the economic unit.

Importance of Research

Environmental accounting promotes effective and efficient utilization of natural resources, it preserves nature, it prevents or reduces environmental pollution by eliminating its causes, it improves the formulation of policies towards sustainable development, and it provides information on the environmental performance. This research can be significant to different groups of economic entities, which can in turn have a positive effect on sales and contribute to future growth in sales.

The Theoretical Aspect

The Concept of Environmental Accounting

The idea of environmental accounting is complex and undefined. Amaka:20,2020) The word "green accounting" was first documented in the 80's by Professor Peter Wood. Green accounting is a new form of accounting that focuses on the environment and the well-being of the planet. Despite being a completely new field of study and practice, it has become significant in a rapid manner. Other than simply reviewing a company's revenue and loss or profit and expense, environmental accounting is a growing field that focuses on the environmental impact of a company's actions, but typically focuses on the responsibility for environmental costs and effects (39: Kumari).

Environmental accounting is also called green accounting and it is the integration of environmental costs, their effects and consequences with financial accounting by entering data and classifying them according to type and function into the financial results of the operations of the economic unit. It is a new branch of science in accounting, environmental accounting issues include all phenomena, objects, reality, procedures or transactions essential to nature and the human environment.

Concern for environmental issues in business has generally become one of the most important global issues, as disclosure of environmental costs reflects the quality and type of manufacturing processes of these economic units. Amaka: 21,2020)).

Definition of Environmental Accounting

Environmental accounting is the procedure of analyzing and reporting the environmental effects of a business's activities, products and services, including the identification, measurement, and communication of the environmental costs and benefits associated with operations. The objective is to increase understanding of environmental effects and make informed decisions that promote sustainable development and responsible environmental management (: 104, 2024 Adebisi).

Many scientists also believe that in order to reduce the environmental damage caused by the operations of an economic entity, this entity must first be capable of measuring the damage. Once the severity of the environmental damage is recognized, the company must be able to communicate this information to regulatory agencies, tax organizations, organizations and other interested parties. It's a procedure of measuring and calculating the monetary value of environmental harm, then calculating the value of the harm and reporting it. (Raghib: 103, 2012)

Objectives of Environmental Accounting

Environmental accounting is considered a larger scope that attempts to provide environmental information to both internal and external stakeholders. This information is intended to demonstrate the benefits of environmental investments, generate revenue and avoid environmental risks. Environmental accounting encompasses multiple aspects, including the assessment of potential environmental dangers, the statistical evaluation of risks and the environment, the revaluation of environmental assets, the development of information systems dedicated to environmental accounting, and the cost analysis of different areas. The primary objective of environmental accounting is to provide additional information about environmental activities that is not present in traditional accounting (2020, 423: Riyadh et al.). Environmental accounting has a unique method of reducing energy expenditure, saving resources, decreasing environmental, health and safety risks, and enhancing competitive advantage. The success of economic entities in creating a beneficial environment and preserving the environment will be commended by society and the environment (Budiono: 1528). The environmental accounting system has a goal of 45-46, 2019).

- Associating monetary environmental accounts with material resource accounts.
- Reviewing the environmental effects and benefits of a particular choice.
- Preserving the material resources
- Creating and measuring metrics that are environmentally friendly to increase the revenue of the company's products. This increases the company's revenue value to both consumers and investors, both of whom are invested in the company's stock (Salim: 443, 2023).

Steps to determine environmental costs Environmental costs are determined through the following steps:(M agablih: 253,2017)

The first step: The calculation of environmental expenses. In this step, the environmental expenditures of the project are determined by the initial environmental conditions or the current state following all environmental changes, The method of execution is then determined. The extra costs associated with the environmental baseline are as follows:

Identify the typical costs, such as salaries, the direct expenses used, and the equipment utilized.

Identify indirect costs, such as environmental reports, environmental monitoring, and licensing fees.

Step two: Measuring the expense of implementing environmental protection laws : Cleaning up harmful emissions from generators, personal injury, machinery damage or loss. From the above, it can be deduced that the costs of the first step are the initial situation's costs, the costs of the second step are traditional costs, and the costs of the third and fourth steps . Indirect indirect costs , which are more difficult to locate, include:

Other people's lawsuits for money, personal injury or property damage. Despite the difficulty in accurately measuring these costs, they are nonetheless significant. The way that environmental costs are accounted for is split into the cost of assets involved in the production process or expenses consumed during the period.

The Impact of Environmental Accounting on Economic Unit Sales

When environmental accounting is managed and used well, it can be of great benefit to companies and their stakeholders.

It can help in achieving an increase in the turnover rate of economic units due to improving the image of the economic unit and the product by improving the cost and pricing of the product.

Ø It can enhance the appeal of the company's stock to investors, which would increase the stock's price due to a more attractive image or product and a risk assessment regarding environmental issues. This causes the stock to be popular, as investors require information about the environmental performance and expenses in order to make decisions.

The environmental accounting system can facilitate a better association between businesses and institutions that offer credit based on the presence of environmental risk.

The environmental account is designed to ensure that companies follow environmental laws, this decreases the likelihood that future financial loss will be caused by environmental issues, and can also lead to avoidance of fines or punitive measures in countries where such laws are present.

Environmental accounting increases the popularity of economic entities due to the expansion of their environmental responsibilities, and environmental accounting promotes research and development.

By implementing more environmentally friendly production processes, this will ultimately lead to a significant decrease in the number of environmental costs that are associated with the company, this in turn will lead to the creation of new products as companies can convert what was previously considered waste into new products. Additionally, environmental accounting can also lead to government assistance in the form of tax breaks and subsidies. (William 2021: 170:).

Study Community and Sample

The research sample consisted of a group of business and economic entities staff, academics and researchers with professional knowledge. (100) Questionnaires were distributed directly to a random sample of the research community to obtain responses on the research topic. (87) Questionnaires were returned from the distributed questionnaires; (13) Questionnaires could not be returned. (4) The returned questionnaires were not valid for analysis, so the research sample consisted of (83) Questionnaires.

Characteristics of the Study Sample

Table (1) illustrates the personal information of the study's participants, which is organized by gender, educational attainment, years of employment and academic interest, respectively.

Table (1). Personal Information of The Study Sample

ratio	number	Statement	T	GENDER
88%	73	male	1	
12%	10	feminine	2	
100%	83	the total		
ratio	number	Statement	T	Academic qualification
1%	1	PhD	1	
30%	25	Master's	2	
4%	3	Higher Diploma	3	
65%	54	Bachelor's	5	
100%	83	the total		
ratio	number	Statement	T	Years of experience
16%	13	1-5	1	
61%	51	6-10	2	
18%	15	11-15	3	
5%	4	16-20	4	
100%	83	the total		

Source: Prepared by the researcher based on the output spss

Presentation and Analysis of Questionnaire Results and Hypothesis Testing

Presentation and Analysis of Questionnaire Results

The results of the questionnaire were summarized and discussed on two primary axes: the independent variable (application of environmental accounting) and the dependent variable (economic unit sales volume). The purpose of the study was to determine the degree to which the participants in the study responded to the questions in the study. The average number of questions asked was extracted for each question, the standard deviation was then determined based on the average number of questions asked.

Table (2). Estimated Scale According to the Five-Point Likert Scale

Arithmetic mean	General trend	Degree	Response
1 to 1.80	I totally disagree	1	I totally disagree
1.81 to 2.60	I disagree	2	I disagree
2.61 to 3.40	neutral	3	neutral
3.41 to 4.20	I agree	4	I agree
greater than 4.20	I totally agree	5	I totally agree

Analysis and interpretation of the paragraphs of the first axis (application of environmental accounting)

Table (3). Arithmetic Mean, Standard Deviation and Relative Importance of The First Axis/ Application of Environmental Accounting

General trend	Arrange the relative importance of the paragraph	Standard deviation	Arithmetic mean	Likert scale for sample response level					Phrases	SEQ.
				I totally disagree	I disagree	neutral	I agree	I totally agree		
				number	number	number	number	number		

				%	%	%	%	%		
I totally agree	1	0.76240	4.3855	0	2	2	39	40	The application of environmental accounting in economic units contributes to raising awareness among the management of economic units of the necessity of adhering to environmental protection.	1
				0%	2.4%	2.4%	47%	48.2%		
I totally agree	4	0.81042	4.3133	2	1	3	40	37	The application of environmental accounting encourages managers to reorganize within economic units to be compatible with environmental requirements.	2
				2.4%	1.2%	3.6%	48.2%	44.6%		
I totally agree	5	0.87694	4.2892	2	1	8	32	40	The application of environmental accounting contributes to training employees in the economic unit to enable them to direct their skills	3
				2.4%	1.2%	9.6%	38.6%	48.2%		

									towards the environment .	
I totally agree	3	0.80295	4.3494	2	1	2	39	39	The commitment of economic units to applying environmental accounting is evidence of the high social responsibility of the managers of these units towards society.	4
				2.4%	1.2%	2.4%	47%	47%		
I totally agree	2	0.82390	4.385	1	2	6	29	45	The integration of administrative systems with accounting systems to achieve environmental aspects contributes significantly to the production of successful environmental accounting management .	5
				1.2%	2.4%	7.2%	34.9%	54.2%		
I totally agree	6	0.74129	4.2882	1	1	5	42	34	Competition is more likely to favour economic units whose environmental performance is better than that of similar	6
				1.2%	1.2%	6%	50.6%	41%		

										economic units.
I totally agree	0.601	4.335	Total arithmetic mean, standard deviation and general trend of the paragraphs							

Source: Prepared by the researcher based on the output sspss

The total arithmetic mean was (4.335) with a standard deviation of (0.601); as is clear, the total arithmetic mean for the paragraph on applying environmental accounting is greater than the hypothetical mean of the scale, which is (3). This indicates that the research sample is completely consistent with all paragraphs of the axis on applying environmental accounting.

The highest arithmetic mean was (4.3855) Paragraph (1) shows that the study sample completely agrees that the application of Environmental accounting in economic units contributes to raising awareness among economic unit management of the need to commit to environmental protection. More than the rest of the paragraphs of this axis.

The lowest average of my account was (4.2882) Paragraph (6) had It is clear that the study sample believes that Competition is more likely to favour economic units whose environmental performance is better than that of similar economic units. Less than the rest of the paragraphs of this axis.

Analysis and interpretation of the paragraphs of the second axis (economic unit sales volume)

Table (4). Arithmetic Mean, Standard Deviation and Relative Importance of The Second Axis/Economic Unit Sales Volume

General trend	Arrange the relative importance of the paragraph	Standard deviation	Arithmetic mean	Likert scale for sample response level					Phrases	S. E
				I totally disagree	I disagree	neutral	I agree	I totally agree		
				number	number	number	number	number		
				%	%	%	%	%		
I totally agree	4	0.77426	4.3614	1	0	9	31	42	Increase the sales of the economic unit when it uses environmentally friendly materials in the production of its products	1
				1.2%	0%	10.8%	37.3%	50.6%		
I totally agree	3	0.71773	4.4217	1	0	5	34	43	Increase unit sales if clean energy sources are used for production processes	2
				1.2%	0%	6%	41%	51.8%		
	5	0.81277	4.2651	0	1	16	26	40		3

I totally agree				0%	1.2%	19.3%	31.3%	48.2%	Increase unit sales when environmental costs are disclosed in mandatory reports	
I totally agree	1	0.68676	4.4699	0	1	6	29	47	The economic unit adopting a policy of enabling the consumer to return the product to the economic unit after its life has ended in return for a financial return so that it can be recycled and not harm the environment leads to an increase in the sales of the economic unit.	4
				0%	1.2%	7.2%	34.9%	56.6%		
I totally agree	2	0.60873	4.4337	0	0	5	37	41	Consumers' knowledge of the extent of economic units' commitment to environmental aspects leads to increased awareness of the importance of this, which is positively reflected in the sales of the economic unit.	5
				0%	0%	6%	44.6%	49.4%		
I totally agree		0.535	4.39	Total arithmetic mean, standard deviation and general trend of the paragraphs						

Source: Prepared by the researcher based on the output sspss

The total arithmetic mean was (4.39) with a standard deviation of (0.535); as is clear, the total arithmetic mean of the sales volume paragraph is greater than the hypothetical mean of the scale of (3). This indicates that the study sample agrees with all paragraphs of the sales volume axis.

The highest arithmetic mean was (4.4699) Paragraph (4) shows that the study sample completely agrees that The economic unit adopting a policy of enabling the consumer to return the product to the economic unit after its life has ended in return for a financial return so that it can be recycled and not harm the environment leads to an increase in the sales of the economic unit. More than the rest of the paragraphs of this axis.

The lowest average of my account was (3.2651) Paragraph (3) had It is clear that the study sample Unit sales increase when environmental costs are disclosed in mandatory reports. Less than the rest of the paragraphs of this axis.

Hypothesis Testing

The first hypothesis: There is a statistically significant relationship between the application of environmental accounting And economic unit sales.

To explore the above theory, the researcher employed a statistical procedure (SPSS.26) to conduct a test (Pearson correlation) that would determine the magnitude and direction of the relationship between the independent variable (environmental accounting application) and the dependent variable (economic unit sales) in order to test the theory. The test results are as follows:

Table (5). Testing the First Hypothesis

Morale level	Correlation coefficient	Variables
0.004	0.316	Environmental accounting application Economic unit sales

The outcomes of the test of Pearson's correlation coefficient demonstrate that there is a direct association between the implementation of environmental accounting and the sales of the economic unit, the coefficient of (0.316) is significant at the $p < 0.05$ level and the moral significance of (0.004) is less significant than (0.05). As a result, the first research hypothesis was confirmed, which states that there is a significant relationship between the implementation of environmental accounting and the sales of the economic unit. Every time environmental accounting is more commonly utilized, the sales will increase as a result.

The second hypothesis: There is a statistically significant effect of applying environmental accounting. In economic unit sales."

To evaluate the above theory, the researcher employed a statistical program (SPSS.26). A simple regression analysis of the form $y = mx + b$ was employed to predict the effect of the independent variable (environmental accounting application) on the dependent variable (economic unit sales). The following table summarizes the results of the simple linear regression analysis and the understanding of the primary results..

Model Summary				
Model	R	R Square	Adjusted Square	Std. Error of the Estimate
1	.316a	.100	.088	.51037

a. Predictors: (Constant), X

The above table indicates that the degree of association (R) between the independent variable (Application of Environmental Accounting) and the dependent variable (economic unit sales) is (31.6%). This is a beneficial value that demonstrates the degree to which the independent and dependent variables are connected. The table demonstrates that, (R squared) is equal to 0.1. That is, the independent variables account for 10% of the variance or variation associated with the dependent variable (economic unit sales) and the remainder is attributed to other causes, including random errors.

ANOVA b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.334	1	2.334	8.961	.004a
	Residual	21,098	81	.260		
	Total	23,432	82			

a. Predictors: (Constant), X
b. Dependent Variable: Y

The above table also demonstrates that the regression is significant due to the fact that it calculates (F) (8.961) and the level of ethics (0.004) is less than (0.05). As a result, the second hypothesis is confirmed, which states that "the implementation of environmental accounting has a significant statistical impact." In economic units sales.

Coefficient			
Model	B	t	Sig.
(Constant)	3.171	7.716	.000
X	.281	2.993	.004

From the above table, it can be seen that the independent variable (implementation of environmental accounting) has a positive impact on the dependent variable (sales of economic entities). The regression coefficient is (0.281), and the morale level is (0.004) less than (0.05); this means that for every increase in the level of environmental accounting implementation, the sales of economic entities will increase by (0.281).

Conclusions

One of the most important strategies that lead to enhancing the performance of economic units and increasing their sales is the application of environmental accounting, by contributing to improving the reputation of the economic unit, which is demonstrated by its commitment to environmental sustainability, which in turn is reflected in its attractiveness to customers and investors who place environmental responsibility at the top of their priorities. This leads to building customer loyalty by producing products that meet the requirements of modern markets and are also environmentally friendly.

The application of environmental accounting also contributes to reducing operational costs by reducing waste and managing resources more efficiently, represented by the possibility of using materials that can be recycled instead of harming the environment, and this will increase the competitiveness of the economic unit.

The application of environmental accounting leads to improving operational efficiency and meeting customer requirements. It also allows taking advantage of marketing opportunities. This enables the economic unit to gain a competitive advantage in markets where demand for sustainable products is increasing. This directly affects the increase in sales of the economic unit and the achievement of sustainable growth.

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