

**Environmental costs versus sustainable business development: An outlook for the board of directors and executive management**

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**Abstract**

It is evident the need for companies to value, measure and disclose environmental impacts in the search to make better decisions regarding environmental management in the future, however, many companies decide not to recognize the environmental costs derived from the development of their social object, this is largely due to the lack of knowledge of environmental accounting on the part of company managers since they focus on short-term profitability, which in most cases implies an excessive consumption of resources, and not on long-term sustainability, which aims at a conscious consumption of these resources. Currently, due to the growing environmental deterioration, it is necessary to take measures to ensure that resources last over time, therefore, it is of vital importance that companies integrate a program that includes environmental management policies into their operational development plan. Therefore, this paper seeks to give a brief description of the role of environmental costs in the sustainable development of companies.

## 1. Introduction

The excessive consumption and exploitation of natural resources, most of which are non-renewable, has long been a constant in the way companies have carried out their social purpose, since they have found it more relevant to achieve high profitability (Ahmad & Khan, 2023), without considering the long-term effects they could cause on the environment (Alakkas et al. 2023). These practices have been present in companies for decades and it is only now that resources have suffered significant deterioration that the depletion of these resources is very close if rationalization measures are not taken. For this reason, companies must implement strategies aimed at achieving a balance between economic development and environmental protection.

As a result of this arises the concept of sustainable development that provides parameters aimed at better management of resources when producing and consuming, that is, a more conscious way of carrying out the social object of companies (Ali et al. 2022), which can be complemented with the identification of environmental costs, to dimension the damage caused to the environment and establish policies to mitigate the detriment of the environment (Erfan et al. 2022).

The evaluation of the impacts on the environment is of vital importance to reach sustainable development, but due to the lack of knowledge in the measurement of natural resources there are still companies that do not recognize the environmental costs, for this reason, it is necessary to establish a link between the company and the environment, generating management policies and measurement of environmental impact. As well as establishing a relationship of accounting with the environment in the search for measurement strategies, valuation and disclosure of the effects on the environment where companies are established (Schaltegger et al. 2022). All this is relevant because if companies understand the importance of environmental costs they will design policies to mitigate future risks such as resource scarcity becoming more competitive in the market.

In accordance with the above and in the search for a better understanding of the role of environmental costs in the sustainable development of companies, this document will be composed of the following parts:

- (i) Sustainable development in organizations: the importance of developing sustainability strategies is highlighted since they contribute to a company having greater opportunities to adapt to different social and economic changes.
- (ii) Importance of environmental costs in relation to sustainable management: the importance of environmental costs in companies is recognized, in order to understand the effects that their activities have on the environment and what they should do to mitigate risks of environmental damage.
- (iii) Role of environmental accounting in sustainable development: reference is made to environmental accounting and its importance in organizations, since, based on environmental management reports, better decisions can be made to develop policies to mitigate the damage caused to the habitat.

Finally, there will be a section where a brief discussion and conclusions will be given, alluding to the importance of the valuation of environmental costs and how they affect the sustainability of companies, it is also mentioned that environmental management has become a competitive advantage in today's business world.

## 2. Sustainable development in organizations

The scarcity of resources that is currently evident due to the indiscriminate use of these, has generated questions about how much longer the existing resources will last, it is necessary that companies acquire a greater relationship with the environment not only focusing on short-term profitability but also on long-term sustainability and as a result of this arises the definition of Sustainable Development (Mishra et al. 2022), understood as the development that meets "the needs of the present without compromising the ability of future generations to meet their own needs" (Brundtland, 1987). Sustainable development requires the involvement of companies and the introduction of environmental management, taking into account not only short-term economic criteria but also their sustainability (Zhang et al. 2022).

Although companies must give greater importance to sustainable development, not all of them do, which is why in recent years some organizations have focused their efforts on the search for strategies that serve as a guide for companies to take it as a basis.

In this sense, concern about climate change and the excessive consumption of resources led the United Nations to enact the Sustainable Development Goals (SDGs) in 2015, consisting of seventeen goals and one hundred and sixty-nine targets covering different aspects among which environmental management in search of long-term sustainable development stands out, in this sense Zhang et al. (2022) state that the SDGs contemplate companies as agents of development and cover fields where they acquire a leading role such as technologies, consumption, connectivity or energy. To ensure that companies are successfully involved, Global Compact, WBCSD and Global Reporting Initiative have developed the SDG Compass guide, which explains how the SDGs affect companies and offers tools and knowledge to introduce sustainability in business.

The different sustainable development initiatives are aimed at promoting greater production using the least possible resources, which from an economic point of view reduces the costs of collection, transportation, treatment and final disposal of waste, which makes the use of resources more efficient, thus contributing to reduce pollution and the depletion of resources, this being the greatest benefit from an environmental point of view.

For companies, sustainable development becomes a vitally important tool for environmental management, which combined with environmental costs allows assessing the impacts on the environment and "knowing their contribution (in case they are positive) or their severity (if they are negative) in their multiple dimensions (economic, financial, social, technical, aesthetic, cultural or perception, institutional, etc.)" (Zhang et al. 2022).

Companies must adapt to economic and social changes, and for this reason, it is necessary to implement programs aimed at using technologies and raw materials that contribute to reducing the emission of pollutants, which indicates that an assessment of the resources consumed in the production process is necessary, becoming important information for both internal and external decision making. "Companies would be highly benefited in terms of the effective allocation of environmental costs, since they would be allocating the fair and necessary budget to develop the proposed policies to start being a sustainable and environmentally friendly company" (Nyahuna, & Doorasamy, 2021).

All of the above highlights the importance of recognizing, valuing, measuring and disclosing environmental impacts so that companies can be sustainable over time, but as it is well known, environmental resources, since they do not have a market where they can be traded, have made

this task more difficult for companies; With the changes introduced by the new market trends this was changing according to Khatoon et al. (2023), "the current economic activity has turned the environment into a group of resources, whether they are for production or consumption, with which it was possible to turn nature into another asset to which a price can be imputed".

Stakeholders have played a key role in bringing the environment into business management. Under multiple forms, ranging from non-governmental organizations (NGOs) to sectoral associations, consumers and consumer associations, employees and trade unions, shareholders and institutional investors, or even the media, they all share, as members of society, the general concern about the deterioration of the environment, and have mobilized under different strategies to introduce the prevention of environmental impacts in the company.

Currently, companies have different methods to recognize, value, measure and disclose the impacts caused to the environment, which has contributed to the fact that the basis for the decision-making of different users is not only purely financial, since more than relying on the figures provided by accounting, it is of utmost importance to evaluate the effects of the economic activity of companies on the environment, as well as what strategies are being implemented to mitigate environmental damage and resource conservation (Khan et al. 2020). It is a fact that companies should give greater importance to environmental costs since these are an indicator to establish policy regarding the management of the effects caused to the environment, i.e., to establish an environmental management plan.

The implementation of an environmental management plan is often accompanied by an environmental management system (EMS), although this depends on the size and complexity of the organization's projects. EMSs make it possible to integrate, in accordance with regulations such as EMAS (Eco-Management and Audit Scheme) or ISO 14001, the prevention of environmental damage throughout the organization and ensure compliance with environmental regulations.

These systems offer other benefits, such as expanding the internal knowledge of the organization; increasing the quality and efficiency of processes; detecting business opportunities and introducing environmental innovations that multiply competitiveness; improving performance by involving employees and strengthening relations with stakeholders; and, if certified by an external entity, enhancing the corporate image and reputation of the organization (Christensen, Hail, & Leuz, 2021).

Organizations should continuously monitor the environmental management plan to identify whether the established goals are still viable based on the evaluation of results and thus undertake new action programs.

### **3. Significance of environmental costs in relation to sustainable management**

Nowadays, organizations must keep environmental costs in mind at all times, as they allow them to evaluate the effects on the environment to make decisions regarding environmental management.

"It is necessary for companies to use part of their profits to contribute to repairing the damage generated to the environment according to the degree of impact that their economic object has on it. For this reason, it is required to evaluate and take into account within the costs of the operation the use of natural resources, to determine at a financial level such impact" (Ekins, & Zenghelis, 2021).

For the development of this document, environmental costs are understood as the monetary or non-monetary valuation of the negative effects caused by companies on the environment, which are not commonly valued in organizations, however, nowadays most of them are converging to the measurement, valuation and disclosure of environmental costs since the depletion of resources is approaching and it is everyone's task to contribute to the improvement of our habitat.

In view of the above, it is important to take a closer look at what has been defined as environmental costs, since it has become an important variable for managing sustainability within organizations. Organizations should take into account such concepts in the search for strategies to make their operations environmentally friendly and sustainable over time, in line with Notley (2019) who considers sustainability as a creative process of change that leads to sustainable companies to change the application of traditional eco-efficiency and environmental management practices (mainly focused on risk reduction to continue operating in the market) by exploring new production and consumption patterns that can open new market opportunities.

In the quest to be sustainable over time, companies must choose to develop a strategy for valuation, measurement, recognition and disclosure of the impacts caused on the environment, being able to recognize the cost-opportunity when relating operating strategies to the environment. "Companies that manage sustainability seek new business models with the capacity to support innovation and change on a systemic scale". By doing this, they break the traditional value chain in which usually a company provides its own product, to understand that it is necessary to start operating in a collaborative work structure with other companies to create sustainable solutions (system offerings) (Notley, 2019).

Sustainable companies are always in search of new markets, since by knowing their environmental costs they can establish commercial expansion programs and this should be a watchword in all organizations since their survival and success will often depend on it. "All the actions carried out within the organization in pursuit of environmental cost management ultimately lead to the sustainability of the environment and the organization" (Basuki & Irwanda, 2018).

#### **4. The Role of Environmental Accounting in Sustainable Development**

According to Cui and Chen (2022), environmental accounting is the generation, analysis and use of financial and non-financial information aimed at integrating economic and environmental policies for the benefit of sustainability.

On the other hand, Ali et al. (2022), state that "environmental accounting provides information on the impact of production and consumption processes on the protection of natural resources and the environment, which essentially refer to land, water and the atmosphere".

Based on these appreciations about environmental accounting, it is valid to say that it provides the opportunity to value and record the different operations that companies carry out aimed at the reduction of pollutants, rationalization of resources, and restoration of the environment, among other activities.

According to Rounaghi (2019), it is important to clarify that sustainable development accounting or environmental accounting is not independent from traditional financial accounting, on the contrary, it is part of it, as it represents the response of accounting to the growing needs for information on the impact of company activities on the environment and the impact of companies derived from regulations and laws that restrict many activities when they are harmful to the environment.

Environmental accounting should be used by companies in the search to be sustainable in the long term, by means of which it is possible to detect different effects caused by the organization on the environment and the valuation of resources, as well as to recognize how far the company has advanced in the sustainability process.

## **5. Discussion and conclusion**

Although some companies have made the decision to value, recognize and disclose the effects they have on the environment many still do not do so, but every time the natural resources are smaller which requires measures as soon as possible since in the not too distant future production can be greatly affected by the indiscriminate consumption of these resources, in addition, it is required that the organization, accounting and the environment acquire greater relationship to develop an environmental management plan that must constantly be evaluated to make decisions that benefit the environment (Gunarathne et al. 2023). According to Nartey (2018), the function of accounting for sustainability is to carry out a rigorous evaluation and monitoring of the control that organizations exercise over the wealth under their orbit, which includes environmental, social and economic wealth.

Accounting thus becomes the guardian of wealth, the protector of resources, systemic relationships and environmental, social and economic services of this wealth. This new accounting proposes an integral sustainability, which is different from classical sustainable development (Wachira, & Wang'ombe, 2019). Integral development presents a hierarchical structure of wealth, so it formulates the integral pyramid of development, which places environmental wealth in the first place, followed by social wealth and, in the last place, the environmental dimension. While sustainable development establishes that there must be harmony between the economic, social, and environmental dimensions that form the triple bottom line, integral sustainability argues that the economic dimension must be subordinated to the social and environmental dimensions. The social dimension is subordinated to the environmental dimension, with environmental sustainability being the ultimate goal of society.

For the idea of sustainable development to be a fact, it is necessary that in each country there are public policies to mitigate the damage caused by economic activity, as in Finland, Iceland, Switzerland, and Norway, countries that have been considered as the most environmentally friendly according to the environmental efficiency index, it does not imply that the countries are the most ecological or cleanest in the world, but that they are countries that carry out great efforts to take care of the environment.

In the case of Switzerland, water protection has been enshrined in the Swiss Constitution since 1970 as a permanent task for the State, the government established in 1876 the first federal law for the protection of forests controlling the maintenance and exploitation of wooded areas, in 2020 the parliament approved the framework of the CO<sub>2</sub> law and foresaw a 10% reduction in carbon dioxide emissions by 2030 compared to 2010. All these laws notoriously limit the actions of companies regarding the use of natural resources and have been in place for many years while in other countries companies have been given complete freedom to use resources without measuring the possible consequences, so this is the time to raise awareness from the governance of the countries so that the proper use of resources becomes a duty and becomes mandatory.

If the companies of the 21st century wish to be successful and above all remain on time, they must take the baton and educate themselves about environmental care and improve their management



and processes, because, in addition to the enormous social responsibility that they have, they can take advantage of this trend to make their business more profitable, since as the days go by, people are becoming increasingly aware of the importance of the environment and this is a potential market that can help to increase the profits of companies that decide to be more socially responsible with the environment. If a company does not pay special attention to environmental care, it can damage its corporate image with all stakeholders, and therefore its reputation, and this can seriously affect its profitability since stakeholders often take certain organizations as models to follow in certain practices.

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### Conflicts of Interest

The authors have disclosed no conflicts of interest.

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