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HARMONIZATION OF ENVIRONMENTAL MANAGEMENT ACCOUNTING - TOOL FOR MANAGING ECONOMIC RECONFIGURATION

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Abstract. *The market economy implies the permanent optimization of an accounting system that ensures: modern methods, policies, and strategies compatible with the requirements of the current economy oriented towards the support of long-term sustainable economic activities. The increase in business relations' complexity has determined a profound revolution in management and implicitly in accounting as the main source of information and assistance in the decision-making process. Also, the awareness of the effects of economic activity on the environment leads to the reconsideration of the financial accounting system, by integrating environmental aspects, thus environmental managerial accounting contributes to providing relevant solutions and reporting adequate information. In this sense, this research presents the importance of streamlining all stages of organizing environmental management accounting to identify relevant solutions for managing adequate information and all existing resources available to economic entities.*

Keywords: *environmental accounting, management, sustainability, information.*

INTRODUCTION

Nowadays, environmental issues have become a common point of global concern. In today's economic context, one of the biggest challenges is to maximize economic benefits without harming the environment. Therefore, accounting must support sustainable development by providing basic information about the social and environmental impact of the entity. The development of the economy at the national and international level requires increasing efforts to find the most rational means of improving management accounting regarding environmental management in order to manage the resources necessary to reconfigure a sustainable economy (Kaya & Yokobori, 1997). Social economy takes into account the objectives of sustainable development, in the sense of responding to current needs without affecting future generations (Sneddon, Howarth, & Norgaard, 2006).

The emergence of sustainability concept brought new terms to the theoretical plane that had to be conceptualized to become operational, such as: viability, vitality, sustainability, and sustainable development of an entity, activities, branches or even countries (Rogers, Jalal & Boyd, 2012). In 1987, the Bruntland Commission, in its final report "The Common Future",

defines sustainable development as development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Bruntland, 1987). Sustainability or sustainable development is a holistic approach that considers ecological, social and economic aspects, considering that these aspects must be considered together to achieve a level of long-term prosperity (Rogers, Jalal & Boyd, 2012). Sustainability in the business environment is not precisely defined, but rather resides in a series of recommendations and actions that do not only pursue immediate profits and leave a legacy for future generations of a sustainable economic environment and a cleaner planet.

Thus, sustainable development represents that sustainable development, which focuses on the balance between social, ecological and economic elements, development that satisfies current needs, without compromising the ability of future generations to satisfy their own needs, offering us a framework of doing so to generate economic growth, achieve social justice, practice green stewardship and weigh governance with the aim of achieving sustainable long-term progress.

I. The role of environmental management accounting in the sustainable development of the business environment

In terms of the sustainable development of entities, the starting point is environmental accounting - a current theme, as it encompasses an in-depth study of environmental issues, both locally and globally, thus helping to improve the environment through highlighting the use of natural resources.

The integration of the environment into the life of the entity requires taking it into account both at the technical, legal, economic, but also accounting and financial level (Morelli, 2011).

Bartolomeo and collaborators analyze the notion of environmental management accounting, defined as the process of generating, analyzing and using financial and non-financial information intended to support decisions in an entity (Bartolomeo et al., 2000). Bennett considered environmental management accounting as "the link between environmental management and management accounting" (Bennett, Bouma & Wolters, 2002). Environmental management accounting is a combined approach that provides financial-accounting information, represented by costs and balances of material flows, to improve the efficiency of the use of these materials, reduce risk and impact on the environment, thus contributing to the reduction of environmental protection costs (Jasch, 2003).

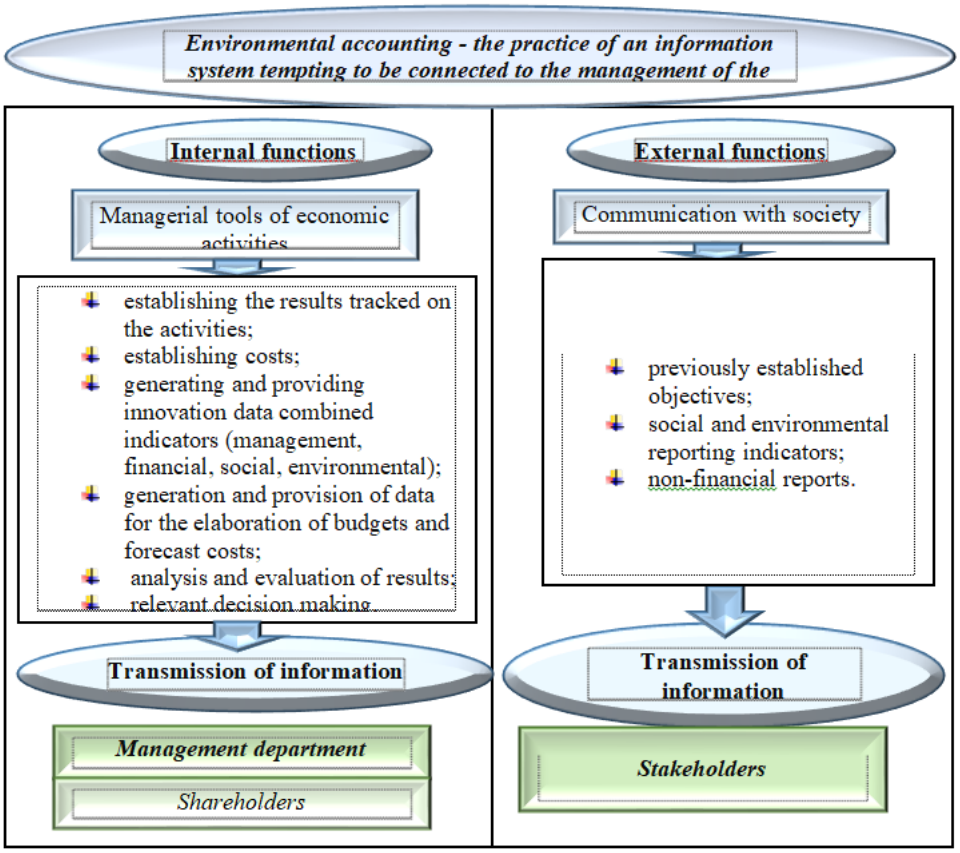
According to the United Nations, environmental management accounting represents the identification and evaluation of the entire spectrum of environmental costs resulting from pollution prevention, as well as the integration of these costs and benefits in the decision-making process (United Nations Division for Sustainable Development, 2001).

Therefore, environmental managerial accounting has as its main object the production of useful information in decision-making (Stanescu et al., 2021). Such accounting ensures the sustainable development of the entity's activity and analyzes the costs and benefits related to the environmental impact on the activity, the contributions to the recognition of the high level of environmental taxes, capital and operating expenses generated by the use of pollution

control equipment. Environmental management accounting is a control tool that provides management with basic information for the decision-making system, which concerns the entity's internal management, but is of particular importance and constitutes the basis for reporting external environmental information.

The environmental accounting system implemented at the level of economic entities contributes to complying with the requirements of sustainable development, through the value estimation of financial and non-financial information. Environmental accounting through the specific functions (figure 1) makes it possible to manage and analyze environmental costs, as well as to transmit the information obtained both internally and externally to the entity.

Figure no. 1. The functions and role of environmental accounting



Environmental managerial accounting has a decisive role in the processing of traditional financial information, however, it will also contribute to the evaluation and compliance with the accounting procedures approved by the management of the economic entity regarding the situation of environmental protection expenses by analyzing: i) the existence of supporting documents corresponding to the registered environmental operations; ii) the veracity of the operations and the analysis of their usefulness; iii) compliance with the legal provisions and the decisions of the entity's management regarding the way to complete the documents; iv) correction of errors according to legal provisions; v) the authenticity of the documents that were the basis of the registered operations; vi) compliance with the procedure regarding the flow of documents; vii) compliance with the accounting procedures approved by the management of the economic entity.

II. Measuring and assessing the sustainability of a business

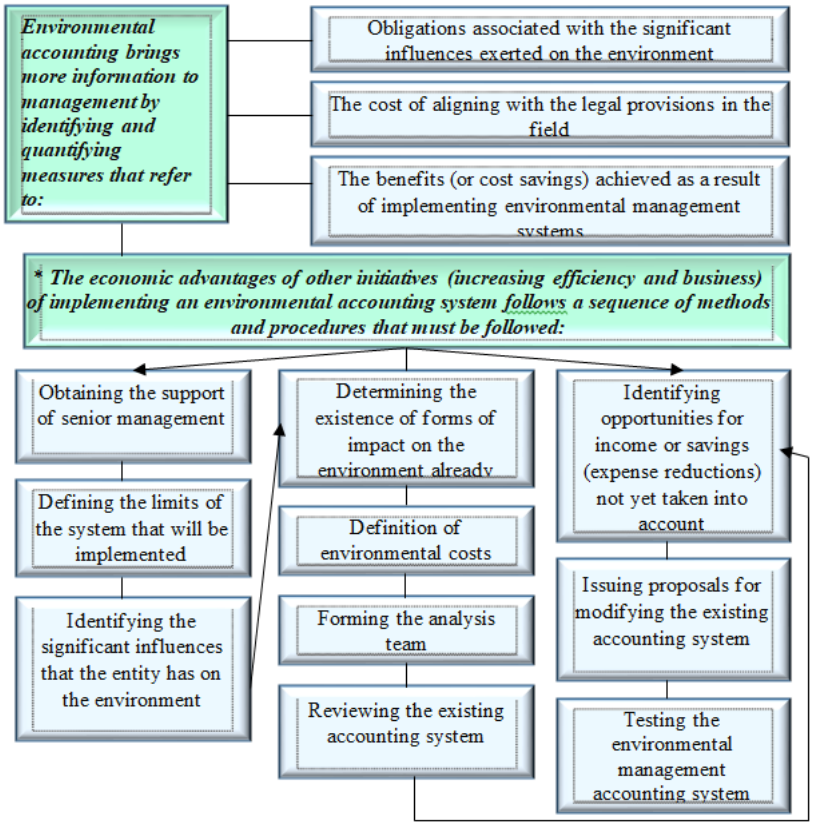
Entities through decision-makers can use the information provided by environmental management accounting to make decisions that can eliminate the negative effects that influence the financial performance of the entity and the environment. The identification of environmental costs and their recognition in the accounting of the entity related to a product, work, service or economic system is necessary to make relevant and successful managerial decisions. Knowing and managing current, future and possible environmental costs is a starting point for achieving the objective of minimizing environmental costs, strengthening recovery activities and streamlining environmental performance.

Information on environmental costs is determined throughout the managerial process to substantiate reliable decisions regarding production cost modelling.

The data obtained are particularly valuable for management initiatives aimed at specific environmental objectives. Environmental Management Accounting / Environmental Management Accounting provides not only the cost data needed to assess the financial impact of these initiatives, but also the physical consumption data (raw material use and renewal rate) that help characterize how these initiatives will had an impact on the environment.

Their role is to identify and properly collect physical data that can lead to the improvement of the decision-making process within the entity. Environmental data is no exception.

Figure no. 2. Environmental accounting - essential factor in assessing the progress of a sustainable economy in the long term



In order to measure and evaluate the degree of sustainable development of an entity, need a series of the most relevant indicators, in accordance with the activity carried out, which reflect reality in the pursuit of predetermined objectives (Ionescu et al., 2020). By their nature, indicators are used to measure a variable appropriate to the achievement of the proposed goal, the desired resources, the effects to be achieved, the quality index or conjuncture variables. The objective of non-financial indicators is to establish a performance measurement system that allows the entity to determine the defining elements that make up long-term financial performance.

The interest given to these indicators stems from the awareness of the fact that the financial indicators that measure performance are by their nature: simplistic measures of results; far from being familiar and intuitive for the people who generate the operations (Diaconu & Albu, 2003), instead the non-financial indicators complement the financial ones, better characterizing the company's performance, because they directly touch sensitive points of the organization (Robu & Sandu , 2006).

III. Management tools needed to reflect environmental impact in accounting

Traditional accounting does not correspond to the new requirements to reflect the environmental impact in accounting, thus, the adoption of new methods and instruments specific to environmental accounting is essential. Integrating environmental management tools into the day-to-day management process can, theoretically, be a problem, given the fact that leaders normally use financial data to coordinate their activity. In this context, the environmental management system, standards, environmental audit play a particularly important role: they provide a framework for the creation of several technical instruments for measuring, monitoring or evaluating environmental impact. For entities, environmental accounting has the role of increasing the efficiency and effects of the environmental protection measures taken within them and to keep records of environmental expenses and income, to report and reflect them in the financial statements.

Table 1. Classification of environmental management tools according to purpose and the data they use

Information used or provided	Piloting tools	Monitoring tools	Control tools
Financial	Environmental budgets The green dashboard Evaluation of environmental accounts	Environmental accounts Environmental indicators	Environmental audit
Physical	Environmental budgets The green dashboard The eco-balance	Environmental indicators	Eco Balance Environmental audit
Qualitative	ISO 14001 standard The EMAS standard		Environmental audit

Surce: Bennett et al. (2002)

Text Non-financial indicators are an important part of the performance of an economic entity. The success of an entity is the team within it, but it must also be supported by a human resources policy aligned with the business strategy. The connection of strategic objectives with performance, performance monitoring through indicators and their concretization represented and represent the crucial challenge of any economic entity.

Performance indicators help quantify the realization of a result, providing visibility into the performance of individuals, teams, departments and organizations, allowing those who have decision-making power to take action towards the achievement of the intended goal. In financial management and operational accounting, there is a close connection between the level of customer satisfaction and the future performance of economic entities.

CONCLUSIONS

The growing pressure on economic entities both to reduce costs and to minimize the impact exerted by economic activity on the environment has contributed to their social and environmental responsibility.

The consideration of environmental issues by international and national corporations, as well as by their leaders, is the result of a gradual evolution of the attitude of the entities, starting in 1970. From an attitude of ignorance and denial regarding environmental issues, today, more and more entities consider environmental performance as an important element of their business strategy.

In order to ensure the success of the harmonization of environmental managerial accounting, it is necessary that the three major objectives presented previously (economic, environmental and social) be fulfilled simultaneously. Harmonization is the process by which the managerial accounting of the environment needs to be put on its normal course of fulfilling its objectives and functions, thus contributing to the better management of resources, to the practice of efficient management over long periods of time. At the microeconomic level, the management accountant is the one who will have to design, implement and correctly manage all the environmental managerial accounting activity, on which the practice of high-performance management depends to a great extent.

Currently, the realization of an integrated system of indicators encounters many difficulties, in the sense that the impact of the approach remains limited in areas such as measuring the scope of the potential to influence and monitoring progress on the researched topic. There are uncertainties especially in the methodological aspect, such as: the object of the measurement, the method of measurement, the spatial limits and time horizons, the influence of the different measurement of the variables on the use of the indicator frameworks.

REFERENCES

Journal papers

Bartolomeo, M., Bennett, M., Bouma, J. J., Heydkamp, P., James, P., & Wolters, T. (2000). Environmental management accounting in Europe: current practice and future potential. European Accounting Review, 9(1), 31-52.

Ionescu, C. A., Coman, M. D., Paschia, L., Gudanescu Nicolau, N. L., & Stanescu, S. G. (2020). Sustainable Economic Intelligence: A New Dimension of Information Provided by Non-Financial Indicators. Improving Business Performance Through Innovation in the Digital Economy, 117-143.

Jasch, C. (2003). The use of Environmental Management Accounting (EMA) for identifying environmental costs. Journal of Cleaner production, 11(6), 667-676.

Morelli, J. (2011). Environmental sustainability: A definition for environmental professionals. Journal of environmental sustainability, 1(1), 2.

Robu, V., & Sandu, R. (2006). Problematica analizei performanţelor–o abordare critică în contextul teoriilor informaţiei şi guvernanţei corporative. Revista Economie Teoretică şi Aplicată, 8, 15-28.

Sneddon, C., Howarth, R. B., & Norgaard, R. B. (2006). Sustainable development in a post-Brundtland world. Ecological economics, 57(2), 253-268.

Stanescu, S. G., Cucui, I., Ionescu, C. A., Paschia, L., Coman, M. D., Nicolau, N. L. G., ... & Lixandru, M. L. (2021). Conceptual Model for Integrating Environmental Impact in Managerial Accounting Information Systems. International Journal of Environmental Research and Public Health, 18(4), 1791.

Books

Diaconu, P., & Albu, N. (2003). Contabilitate managerială aprofundată. Editura Economică.

Kaya, Y., & Yokobori, K. (Eds.). (1997). Environment, energy, and economy: strategies for sustainability (pp. 16-26). Tokyo: United Nations University Press.

Rogers, P. P., Jalal, K. F., & Boyd, J. A. (2012). An introduction to sustainable development. Earthscan.

Edited Books

Bennett, M. D., Bouma, J. J., & Wolters, T. J. (Eds.). (2002). Environmental management accounting: Informational and institutional developments (Vol. 9). Springer Science & Business Media.

Documents from conferences

Bruntland, G. H. (1987). Our common future. The World Commission on Environment 1 and Development, 45-65.

United Nations Division for Sustainable Development (2001), Environmental Management Accounting, Procedures and Principles. New York and Geneva: United Nations Publications.