

# The Application of Green Accounting According to Activity-Based Costing for an Orientation Towards a Green Economy: Field Study

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## ABSTRACT

The present study aims to identify the opportunities and possibilities for applying green accounting according to the activity-based costing in light of the trend towards a green economy. To achieve this aim, the researchers designed and administered a questionnaire. A random sample of 180 individuals (participants) from managers and accountants of economic institutions in the southeastern area in Algeria are selected, and the statistical program SPSS 22 is used to analyze the obtained data. The study found that the sample institutions have a low level of interest in the environmental dimension, as well as a low level of interest in measuring environmental costs, which requires increased pressures on these organizations, whether from the government side or from the consumers.

## KEYWORDS

Activity-Based Costing, Environmental Cost Drivers, Green Accounting, Green Economy

## INTRODUCTION

Sustainability contains three interconnected and overlapped pillars; they are environmental, social and economic parts (Rounaghi, 2019). The United Nations conference on the environment and development, held in Rio de Janeiro in 1992, formally adopted the concept of sustainable development that is defined by the Brundtland report as a “development that meets the needs of the present without compromising the ability of future generations to meet their own needs”. Twenty years later, the Rio+20 conference coined the concept “green economy”. This popular concept is perceived as a pathway to sustainability by international organizations such as The World Bank (2012) and the United Nations Environment Programme (Loiseau & all, 2016).

Emerging from the field of environmental economics, the concept of a green economy became the centerpiece of the Rio+20, launching the green economy as the new buzzword in discussion related to sustainable development. In its simplest terms, the green economy is low-carbon, resource efficient and socially inclusive, revenue and job growth are powered by public and private investment

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that decreases carbon emissions and pollution, increases energy and resource efficiency, and avoids biodiversity and ecosystem services losses (Vuola & Korkeakoski, 2020).

For green economy, Green accounting is an important concept (Unnithan & Somasundaram, 2019). Green accounting is a type of accounting that attempts to factor environmental costs into the financial results of operations (Rounaghi, 2019). It has been argued that Gross domestic product disregards the environment and thus policymakers need a revised model that integrates green accounting (Sachin & Sandeep, 2019). It is a path for intellectual expansion of accounting. By means of this tool, the proper decision making and the introduction of greener technology will reduce many of the environmental costs. It plays a very important role in the Corporate Social Responsibility (CSR) of a firm and also plays a vital role in decision making of the firm regarding the methods or procedure used and, consequently, the profitability of the enterprise. The government should take strict penalties for those who do not adhere to environmental standards, and organizations should take an initiative to implement green accounting in all the levels of the organization (Agarwal & Kalpaja, 2018).

Green accounting or environmental accounting is interlinked with two basic functions of management accounting: planning, and data collection and reporting. In the case of planning, green accounting uses prevision analysis to measure future impacts on environment. In the second case, environmental data collection and its reporting to management is based on an efficient analysis of data for substantiating decisions (Stoicesa, 2012).

In recent years, managers have begun to embrace activity-based costing; ABC (Rimer, 2000) as an efficient management accounting tool that identifies the true production costs and provides an incentive to improve continuing processes in the company or even re-engineering that is not necessarily established through traditional accounting systems (Van Der Poll, 2014). ABC is a method of evolving cost estimates in which the project is subdivided into discrete, a quantifiable work unit or activities that must be defined in order that productivity can be measured in units. A cost estimates for each operation is prepared after the project is broken down into its activities. For each activity, this individual cost estimates would include all costs of labor, materials, equipment, and subcontracting including overhead. To obtain an overall estimate, each complete individual estimate is added to the others. Contingency and escalation can be calculated for each activity or after all the activities have been summed (Bogdănoiu, 2009).

Within the above mentioned framework, this research falls under the uses of the activity-based costing method; furthermore, it seeks to find a language that helps to facilitate the understanding of the new terms or concepts used by green accounting for the purposes of internal uses of enterprises. The green economy, which encourages environmental protection, social inclusiveness and economic growth at the same time, is expected to help the least developed countries that are heavily resource-dependent (Vuola & Korkeakoski, 2020). Therefore, this study is conducted in Algeria as one of those countries to tackle the following main research question:

What is the reality of interest in applying green accounting according to the ABC method in light of the trend towards a green economy?

And the following sub-questions:

How to build a model for applying the ABC method while adopting green accounting?

To what extent do business organizations pay attention to the environmental dimension in the Algerian environment?

How interested are business organizations in measuring green costs in the Algerian environment?

The importance of this study stems from the extent to which the institution knows how to implement green cost accounting according to the ABC method in light of adopting green accounting and following up on what it receives from the environment and what it reciprocate, through green accounting information systems. It would help in the effective use of resources and the reduction of pollution to some extent.

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