



Basics of Environmental Accounting

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1. Introduction

The term environmental accounting has many meanings and uses. Environmental accounting can support national income accounting, financial accounting, or internal business managerial accounting. This primer focuses on the application of environmental accounting as a managerial accounting tool for internal business decisions. Moreover, the term environmental cost has at least two major dimensions: (1) it can refer solely to costs that directly impact a company's bottom line (here termed "private costs"), or (2) it also can encompass the costs to individuals, society, and the environment for which a company is not accountable (here termed "societal costs"). The discussion in this primer concentrates on private costs because that is where companies starting to implement environmental accounting typically begin. However, much of the material is applicable to societal costs as well.

Environmental accounting is the practice of using traditional accounting and finance principles to calculate the costs that business decisions will have on the environment. For example, before choosing to close down a manufacturing plant and outsourcing the function to a foreign corporation, a business uses environmental accounting to determine the short- and long-term effects of the decision, such as unemployment in the plant's region. Environmental accounting is often championed as a component of corporate social responsibility.

2. Methods of Environmental Accounting

Businesses use three generally accepted methods to implement environment accounting: financial accounting, managerial accounting and national income accounting. Financial accounting is the process of preparing financial reports, such as earning statements, for presentation to investors, lenders, governing bodies and other members of the public. In this instance, environmental accounting estimates are presented as part of the financial accounting reports.

Managerial accounting is used solely for internal decision making. In this capacity, department heads use environmental accounting to collect data used by senior management to make business-critical decisions, such as those surrounding procurement. Alternatively, environmental accounting is used by government agencies to calculate the nation's gross domestic product and how business decisions affect the country's economic wellbeing.

3. Rationale

Environmental costs are defined by the U.S. Environmental Protection Agency as "the many different types of costs businesses incur as they provide goods and services to their customers." An example of this is leftover manufacturing materials. In addition to allowing a business to operate in a "greener" fashion, environmental accounting management provides it with monetary benefits. For example, if an environmental accounting report indicates that a business consistently discards a large amount of excess material, a company can use this information to choose to purchase less material. While this allows the business to minimize the waste it dispenses in the environment, it is also allows it to save money by not purchasing excess.

4. Implementation of Environmental Accounting

Environmental accounting can be implemented by businesses of all sizes. Whether administered by a global corporation or a small business, elements need to be in place for success. The firm's senior management team must support these practices. These leaders are instrumental in setting a positive tone when communicating the benefits of environmental accounting practices to the employee population. The senior management team would be best served by developing cross-functional teams to administer the process. Consisting of employees across all business lines, including finance, sales, manufacturing and procurement, these teams ensure that all environmental accounting policies and procedures are communicated and followed.

5. Subfields of Environmental Accounting

Environmental accounting is organized in three sub-disciplines: global, national, and corporate environmental accounting, respectively. Corporate environmental accounting can be further sub-divided into environmental management accounting and environmental financial accounting.

Global environmental accounting is an accounting methodology that deals areas includes energetics, ecology and economics at a worldwide level.

National environmental accounting is an accounting approach that deals with economics on a country's level.

Internationally, environmental accounting has been formalized into the System of Integrated Environmental and Economic Accounting, known as SEEA. SEEA grows out of the System of National Accounts. The SEEA records the flows of raw materials (water, energy, minerals, wood, etc.) from the environment to the economy, the exchanges of these materials within the economy and the returns of wastes and pollutants to the environment. Also recorded are the prices or shadow prices for these materials as are environment protection expenditures. SEEA is used by 49 countries around the world.

Corporate environmental accounting focuses on the cost structure and environmental performance of a company.

Environmental management accounting focuses on making internal business strategy decisions. It can be defined as:

"The identification, collection, analysis, and use of two types of information for internal decision making:

1. Physical information on the use, flows and fates of energy, water and materials (including wastes) and
2. Monetary information on environmentally related costs, earnings and savings.

As part of an environmental management accounting project in the State of Victoria, Australia, four case studies were undertaken in 2002 involving a school (Methodist Ladies College, Pert)

6. Why Do Environmental Accounting?

Environmental costs are one of the many different types of costs businesses incur as they provide goods and services to their customers. Environmental performance is one of the many important measures of business success. Environmental costs and performance deserve management attention for the following reasons:

1. Many environmental costs can be significantly reduced or eliminated as a result of business decisions, ranging from operational and housekeeping changes, to investment in "greener" process technology, to redesign of processes/products. Many environmental costs (e.g., wasted raw materials) may provide no added value to a process, system, or product.

2. Environmental costs (and, thus, potential cost savings) may be obscured in overhead accounts or otherwise overlooked.
3. Many companies have discovered that environmental costs can be offset by generating revenues through sale of waste by-products or transferable pollution allowances, or licensing of clean technologies, for example.
4. Better management of environmental costs can result in improved environmental performance and significant benefits to human health as well as business success.
5. Understanding the environmental costs and performance of processes and products can promote more accurate costing and pricing of products and can aid companies in the design of more environmentally preferable processes, products, and services for the future.
6. Competitive advantage with customers can result from processes, products, and services that can be demonstrated to be environmentally preferable.
7. Accounting for environmental costs and performance can support a company's development and operation of an overall environmental management system. Such a system will soon be a necessity for companies engaged in international trade due to pending international consensus standard ISO 14001, developed by the International Organization for Standardization.

7. Who Can Do Environmental Accounting?

Environmental accounting can be employed by firms large and small, in almost every industry in both the manufacturing and services sectors. It can be applied on a large scale or a small scale, systematically or on an as needed basis. The form it takes can reflect the goals and needs of the company using it. However, in any business, top management support and cross-functional teams are likely to be essential for the successful implementation of environmental accounting because: Environmental accounting may entail a new way of looking at a company's environmental costs, performance, and decisions.

Top management commitment can set a positive tone and articulate incentives for the organization to adopt environmental accounting.

Companies will likely want to assemble cross-functional teams to implement environmental accounting, bringing together designers, chemists, engineers, production managers, operators, financial staff, environmental managers, purchasing personnel, and accountants who may not have worked together before. Because environmental accounting is not solely an accounting issue, and the information needed is split up among all of these groups, these people need to talk with each other to develop a common vision and language and make that vision a reality. AT & T is one example of a company that has combined senior management support and use of a cross-functional team for its environmental accounting initiative.

Companies with formal environmental management systems may want to institutionalize environmental accounting because it is a logical decision support tool for these systems. Similarly, many companies have begun or are exploring new business approaches in which environmental accounting can play a part:

- Activity-Based Costing/Activity-Based Management
- Total Quality Management/Total Quality Environmental Management
- Business Process Re-Engineering/Cost Reduction
- Cost of Quality Model/Cost of Environmental Quality Model
- Design for Environment/Life-Cycle Design
- Life-Cycle Assessment/Life-Cycle Costing

All of these approaches are compatible with environmental accounting and can provide platforms for integrating environmental information into business decisions. Companies using or evaluating these approaches may want to consider explicitly adopting environmental accounting as part of these efforts. Small businesses that may not have formal environmental management systems, or are not using any of the above approaches, have also successfully applied environmental accounting. As with larger firms, management commitment and cross-functional involvement are necessary.

References

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