

## Chapter 4

# Costs and Externalities in the Context of Social and Environmental Crises

### ABSTRACT

*An in-depth analysis of the current approach of global crises reveals an obvious tendency to use nature as a resource rather than a stakeholder of human activities. The purpose of this chapter is a critical analysis of current knowledge in the field of accounting recognition policies and procedures, leading to a conceptual clarification of externalities induced by climate change. The most important result is an innovative framework for management accounting, based on a complex approach, triggered by the reality of social and environmental crises; the proposed component is the expanding of conventional costing model to an eco-costing model able to generate costs compatible with the sustainable development objectives. A fundamental inductive research is conducted to identify the theoretical and practical difficulties of externalities recognition in social and environmental accounting.*

### INTRODUCTION

Market forces that do not generally uphold ecological principles are governing the contemporary global economy. Prices include accounting information designed as an expression of an economic reality that is ignoring the environmental impact, and therefore, generating decisions in total dissonance with the planetary ecosystem. Climate change, having global warming as a primary component, is the first in a top ten environmental issues (Esty & Winston, 2006, p. 287), along with the energy crisis, water quality, biodiversity, land use, deforestation, and water and air pollution. In this particular context, the joint efforts of all fields' specialists and researchers are convergent with sustainable development. The accounting literature has demonstrated an important concern for sustainability issues by challenging the role of accounting, justifying the alleged belief in the sustainability of business operations, and developing alternative accounting technologies that might offer different meaning structures of *nature*, *society* and *business success* (Bebbington & Thomson 1996; Stone 1995; Canadian Institute of Chartered Accountants [CICA], 1993; Gray, Brennan, & Malpas, 2014).

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Currently, the global economy is characterized by problems requiring urgent and sustainable solutions to achieve medium and long-term benefits. As Bourne (2008, p. 8) has stated, there “is a growing awareness of an unprecedented planetary crisis on multiple fronts: global warming, environmental degradation, massive loss of species, dwindling natural resources, difficulties in switching to sustainable forms of energy, rapidly increasing population, and widespread poverty, hunger, and disease”. This indicates the presence of a *global crisis*, as described by Renner (2010): “Nations around the world, particularly the weakest countries and communities, confront a multitude of pressures. They face a debilitating combination of rising competition for resources, severe environmental breakdown, the resurgence of infectious diseases, poverty and growing wealth disparities, demographic pressures, and livelihood insecurity”. The systemic approach is best suited for such an extremely complex structure. Given the circumstances, a non-linear thinking is needed, specific to complexity sciences. For environmental issues, the literature proposes multi-criteria analysis of decision-making, aimed at enclosing more and more aspects of strategic environmental assessment (Robu & Macoveanu, 2009).

The first part of this chapter addresses the existing concepts and practices convergent with the externalities and their integration in the conventional costing model by reviewing the literature in the field. The start point of the research refers to global climate changes as a core cause of social and environmental crises. Then, the concept of externalities is discussed by emphasizing how should it affects the cost information and entity’ sustainable performance. Related to this issue, the eco-cost concept is introduced and a debate regarding its connection with social and environmental accounting is conducted. The second part of the chapter presents controversies on the issues discussed in the first section in order to encompass the variability created by crisis management. The need for real-time crisis management opens new horizons for traditional accounting, such as new instruments of thinking and measurement. Based on an extended literature review followed by controversies this chapter per authors expand the conventional costing model to an eco-costing model able to generate costs that are compatible with the sustainable development objectives.

## **EFFECTS OF GLOBAL CLIMATE CHANGE AND ACCOUNTING IMPACT: THE BACKGROUND**

At a planetary level, environmental problems are clear; the solutions are global and have environmental protection as a foremost objective. Context-sensitive, the Environment Conference that took place in Stockholm – 1972 and the Environment and Sustainability Conference held in Rio de Janeiro – 1992 have emphasized the importance of environmental protection at a global level and the need for cohesive actions, controlled and harmonized. The Kyoto Protocol (Environment Conference Kyoto, 1997) has created policies for reducing gas emissions in order to diminish the explosive growth of global warming. Consequently, at a European level, the Single European Act, establishing that actions in one country must not cause environmental damages in another, has defined the environmental policy for the first time. Therefore, the European Union [EU] member states must take joint action and endorse a coherent global policy for environmental protection. In addition, there has to be a correlation between the undertaken actions and the type of pollution for certain geographic areas. In 2007, the United Nations Intergovernmental Panel on Climate Change [IPCC], reuniting experts from around the Globe, has formulated the fourth report regarding the impact of global warming on humankind and Earth. The Report draws attention upon the damages of global warming being larger and more rapidly increasing

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