THE EFFECTS OF DEVELOPING THE NEW GREEN ECONOMY ON MANAGEMENT SYSTEMS

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Abstract. *The current period is strongly influenced by the shaping of the ecological economy, as a component of the new economy. Ecological economy is a consequence of the concerns of States in the field of ecology. The concept of "green" is becoming more and more present in all economic areas, having a definite influence on the dynamics of economic growth, which may not be performed except as an ecological and economic growth based on a plurienergetic and recycling upper part of raw materials and energy, in which human beings respect the laws of nature and know the breeding capacity of the natural environment[1]. It was the formulation of a common problem to all countries: what are the concrete ways to sustain economic growth without hurting the environment? Effective environmental protection requires first and foremost pollution prevention and waste control then upon completion of the manufacturing process, in which context the adoption of environmental management systems represents an indicator of high quality management. The final product is considered the engine of environmental management practices, which should focus on finding solutions to reduce environmental risks or to resolve the problems resulting from the design, production, distribution or the removal of the product.*

Keywords: *green economy, new economy, ecological economics, environmental management systems, sustainable development, sustainability.*

1. Introduction

The current period is strongly influenced by ecological economy as a component of the new economy. Ecological economy is a consequence of the concerns of States in the field of Ecology: Brazil has become one of the most important players on the ecology scene, obtaining about 44% of the energy from fuel regeneration, while the global average is 13% and at the European level of 6.1%; in the year 2009 China has surpassed America in regards to the value of investments made in technologies for energy production from renewable resources, with a total value of investments of

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[1] Sîrb C. C., *Improving the Management of Companies by the Adequacy of the Legal Framework in Relation to the Environment,* (PhD Thesis), 2005.

$34.6 billion, almost double the U.S. (18.6 billion), and announced its intention to reduce energy consumption by 20% over the next five years, similar to the commitment assumed by Europe to reduce the emission of greenhouse gases by 20% until 2020.

Also in December 2008, the European Parliament established by the adoption of the legislative package "Energy-Climate Changes" three long-term objectives: to reduce emissions of greenhouse gases by 20% by the year 2020 (compared to 1990 year) and 30% in a situation where an agreement is reached at the international level, the share of renewable energies in final energy consumption of the EU by 20% by the year 2020, including a target of 10% for biofuels in the total consumption of fuels used in transport and increasing energy efficiency with 20% by the year 2020[2].

These are just a few examples, but cover a large part of the world economic map and showing the concrete concerns of States with regard to the environment, having as consequence the shaping and trying to define a new economy, Green or Eco-friendly Economy.

The new economy is "an economy characterized by long-term growth driven by an always increasing rate of productivity, which is caused mainly by the continuous production, adaptation and diffusion of information and communications technology"[3]. A global approach to the concept that "the term «new economy» refers to a set of quantitative and qualitative changes which, over the last fifteen years have transformed the structure, functioning and rules of economy"[4].

Therefore, the new economy must be substantiated on the basis of a few prerequisites:

– natural resource crisis is a reality; the natural environment has been affected due to actions exerted on it and can no longer provide the necessary resources, and as a result any negative effect on the environment must be eliminated or at least reduced;

– must be given increased attention for the recovery with the least loss of resources, as well as a high utility for waste;

– it is necessary to find new resources and technologies to generate them;

– economic actions have to take into account of the actual parameters of the planet, and globally must be a unitary program of fighting and

[2] http://www.anpm.ro/Mediu/schimbari_climatice-6

[3] De Masi Paula, Estevao M. and Kodres Laura, (2001) *Who Has a New Economy?,* Finance & Development, June, vol. 38, nr. 2, pp. 1-8.

[4] www. neweconomyindex.org/

control where possible the negative effects of economic activities on the environment.

A new economy – that you look at from the ecological perspective – should be based on the following principles[5]:

- Principle of human existence in the closed circle (up to the conquest of outer space);
- Principle of Human reintegration into nature;
- *Primum non nocere* (first do not harm in relation to the environment);
- The preservation and growth of biomass, biodiversity and bioproductivity;
- Permanent provision of resources;
- The principle of economic, social and environmental efficiency;
- Societal existence is interactive with the environment;
- The principle of social equity;
- Accountability for how Governments, through promoted policies, manage and increase the resources to ensure the future of new generations.

So, it is imminent as global ecological policies to retrieve within their own countries' economies, and within countries, within each economic sector and at the level of individual enterprises. It is obvious that the new economy implies ensuring a sustainable development.

Economic growth "is a multifaceted process, which combines to infinity various elements and the most different sizes", and "GNP (gross national product) – correlated with population size, with its distribution by age groups and activities, with the quality of products, as well as other non economic factors is the main indicator of economic growth[6]". Thus non-economic factors are mentioned in the composition of the GNP, we can include natural resources and residues with poisonous influence (pollutants) or the qualitative influences arising from the natural environment's impairment.

The concept of "green" is increasingly present in all economic areas, with a definite influence on the dynamics of economic growth. A new definition of GNP in the year 1973 includes two new costs: the costs necessary to stop the increase in pollution and the costs incurred by the

[5] Ghiţă P. T., *The New Economy. Horizon and Changes*, http://www.racai.ro/INFOSOCProject/PaulTanase%20Ghita_st_g02_new.pdf

[6] P. A. Samuelson, *L'Economique tehniques de l'analyse economique*, Libraire Armant Colin, Paris, 1968, vol. II, p. 931.

measures taken to halt the accelerated consumption of non-renewable resources or to find their substitutes[7].

It is evident an increase in the costs generated by the economic growth process, due to new investments in the area of environmental protection, whether it be research activities to find solutions to recovery reusable resources or to the development of alternative energy sources, whether it be environmental protection activities.

Economic growth cannot be analyzed without taking into account the environmental aspects. In the current context, economic growth can only be achieved as an economic-ecological growth, based on plurienergetic consumption and on a advanced recycling of raw material and energy, in which human beings respect the laws of nature and knows the reproduction capacity of the natural environment[8].

2. Effects of globalization on the environment

Between the ecological economy and the notion of globalization there is a bidirectional link, the effects of globalization on the environment being both positive and negative. Globalization can be seen as a way for transnational firms to control the markets and existing resources, with a view to increasing profits, thereby generating an increase in resource consumption, an increase in activity and implicitly greater environmental damage, or we can look at globalization as a way of distributing capital and technologies that can be both beneficial and harmful to the environment. The balance element in the globalization process must be local, national policies, which must be directed towards protecting the natural environment, as well as world policies.

The positive effects of globalization are: the imposition of environmental and quality standards on products, stimulating the cooperation between States both in coordinating internal environmental protection policies and in the management of common goods, as well as dissemination of new technologies. Also, the globalization of environmental problems led to the emergence of international organizations whose main purpose is to develop programs for rational exploitation and preservation of natural capital.

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[7] Gunnar Myrdal, *Process de la croissance*, PUF, Paris, 1973.

[8] Sîrb C. C., *Improving the Management of Companies by the Adequacy of the Legal Framework in Relation to the Environment,* (PhD Thesis), 2005.

3. Environmental Management Systems

Environmental Management Systems (EMS) are a component of the management system of an organization, used to develop and implement its environmental policy and environmental management, or a component of the management system of a company that includes organizational structure, obligations, practices, procedures, processes and resources needed to determine and assume a fair environmental policy.

Environmental management systems are based on a combination of the following approaches:

- Prevention and minimization of losses;
- Demand management (demand side management);
- Design for the environment;
- Positioning of the product at the centre of all activities (product stewardship);
- Full cost accounting.

An effective protection of the environment primarily requires pollution prevention and then waste control when completing production processes. Pollution prevention refers to the use of those raw materials, processes or practices that reduce, minimize or eliminate pollutants or waste (losses) from the start. Pollution prevention technologies include the replacement of raw materials, changes in processes, reuse of materials or recycling.

Demand management focuses on understanding customer's needs and preferences and product usability, based on three principles: resource economy (energy), offering exactly those products customers want and increasing efficiency as regards how the user uses the product.

4. Factors that condition the implementation of environmental management systems

The factors that determine the implementation of an environmental management system can be grouped into four categories:

- Regulations
- Interested parties;
- The need to control the costs;
- Competitiveness.

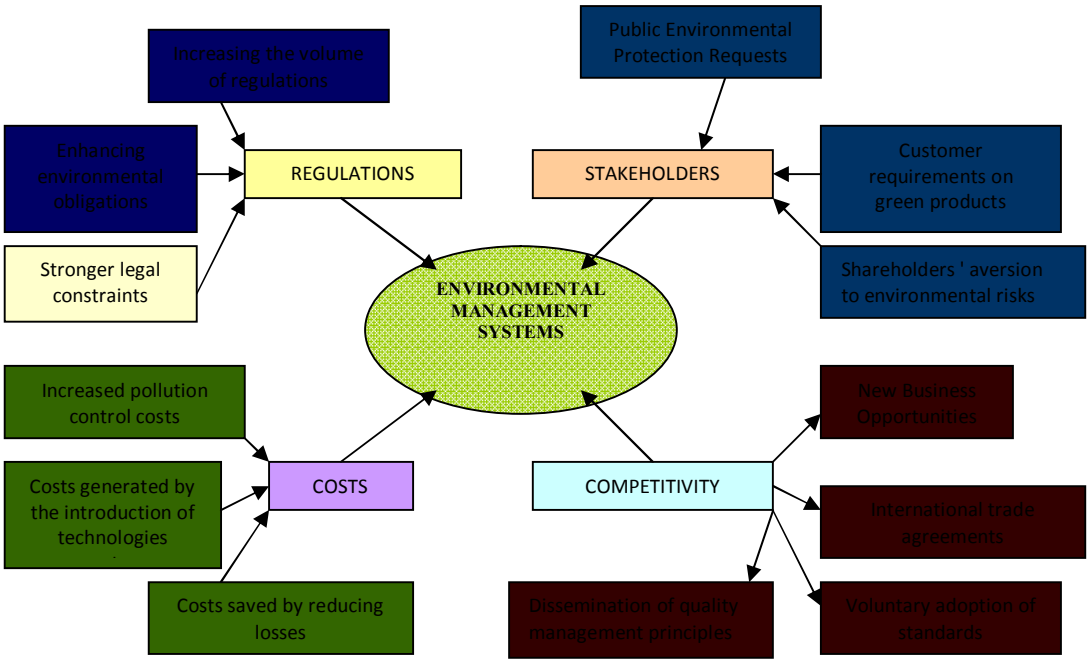

Figure 1. Determinant factors of implementation of environmental management systems.

Source: Adaptation after Berry M., Rondinelli D. (1998), Proactive Corporate Environmental management: A new Industrial Revolution, The Academy of Management Executive, vol. 12, no.2, pp. 38-50.

5. Consequences of the development of the new ecological economy on management systems

The concept of sustainable development and sustainability led to the emergence of a multitude of approaches, tools, methods, to support the attainment of these goals.

Rethinking the new eco-perspective economy involves the use of new managerial instruments at the level of businesses, of which we will stop on the Environmental Management System (EMS).

An environmental management system consists of a series of concrete actions to ensure the protection of the environment in which the enterprise operates.

The stages for implementation of an Environmental Management System are:

- Initial analysis of environmental impacts associated with enterprise activity;
- System planning;

- The actions' plan to achieve the proposed goals;
- Training and awareness of all personnel;
- Execution of the system;
- Inventory of legislation in the field;
- Control of the system within the enterprise;
- Internal and external audit.

Internal cost management viewed from the environmental perspective should consider revising the calculation of production costs based on material flows, and taking into account the decision-making process of all relevant and significant costs.

The Eco-efficiency concept will be reflected in reducing environmental costs and impacts through efficient use of energy, water and materials, planning and implementation of investments in pollution control, planning and implementation of energy and material efficiency projects, assessing the total annual revenues of investments in eco-efficiency activities.

Also, the strategic position of companies will be strengthened by:

- Evaluation and implementation of programs to ensure the long-term strategic position of the company;
- The design of "green" products and services which will constitute the focal point of acquiring the competitive advantage;
- Estimation of internal costs in terms of future regulations;
- Reporting to interested parties: local community, customers, and investors.

6. Conclusions

Economic growth cannot be analyzed and modeled in the absence of material and human resources, and without ensuring a dynamic balance of natural economic structures.

Both globalization and sustainable development are concepts closely linked to a green economy, leading to the development of its own strategies, such as resizing economic growth in view of a more balanced distribution of resources, conservation and enhancement of natural resources, maintenance of the ecosystems' diversity, overseeing the environmental impact of the economy, reorienting technologies and controlling the risks produced by them etc.

Application of the principles of sustainable development, appropriate macroeconomic and sectoral policies and price policies reflecting the full

costs of the exploitation of environmental resources – enter the economy on a trajectory of sustainable development.

The design of environmental policies is fundamental in the new ecological economy, and constitutes the starting point in subsequent developments at lower levels of sectors, branches, businesses. The development of regulatory instruments such as environmental standards which are branches according to certain criteria must be the central activity of the ecological economy, accompanied by the development of economic instruments for pollution control such as taxes, subsidies, non-refundable guarantees etc.

The implications of the emergence and development of the new ecological economy are visible at the level of companies' general management through the necessity of implementing environmental management systems but also at the level of financial management by the emergence of a new costs category – environmental costs.

The future concerns of companies will have to be linked to the development and implementation of the eco-efficiency concept whose purpose will be reflected both in reducing the total costs but also in consolidating a long-term strategic position through increased competitive advantage.

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