

THE EVOLUTION OF THE CONCEPT OF ENVIRONMENTAL PROTECTION FROM AN ECONOMIC PERSPECTIVE

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Abstract

The concept of protection of the environment dates back before our era; it has undergone different modifications and approaches, always adapting itself to new challenges, trying to offer viable solutions to them. Classical Economics has the merit of having associated the economic problems with the ecological ones, an idea which was then adopted by the neoclassical thinking, the very one that formulated the notion of “ecological economy” as a new branch of research.

A new degree of economic understanding of the ecological problems has been reached thanks to the concept of “sustainable development”. In order to attain the targets of this type of development, a series of economic instruments, whose benefits may lead to identifying new solutions for protecting the environment, can be used. The economic instruments have met different approaches in countries from all over the world, at first mainly occidental, but then being consecrated and integrated in the policy of interstate organisations as well. It is very important that the instruments which integrate the policy of protecting the environment into the economic one should be identified and adopted, thus leading to changes in both the producer and the consumer behaviour and even generating financial resources that are necessary to compiling an environmental infrastructure.

A common conclusion that can be reached after taking into consideration all on account of different experiences is the fact that the economic and environmental variables are mutually dependent, interdependent (not mutually exclusive), as the environment is an essential part for many economic activities, and the economic decisions are also important for the quality of the environment.

To sum up, there is no such thing as a problem concerning “either the environment or the economy”; on the contrary, the only existing problem concerns “the environment, as well as the economy”.

Key words: environment, sustainable development, economic measures

INTRODUCTION

People’s interest regarding the protection of the environment and its constituting elements is very old. Documents referring to the preservation of soils, which belonged to the Latin agronomists, dating back before our era, give hard evidence of this fact. The close binding between the economic problems and the ecological ones, as far as their theoretical and practical interconnections are concerned, started to build itself up in the 18th century, when the Industrial Revolution began. Until then, the nature didn’t have much to suffer from the activities developed by humans, and, more than that, the analysis of their economic impact hadn’t been considered yet.

1. THE ABORDATION CONCERNING THE CONCEPT OF ENVIRONMENTAL PROTECTION-CLASSICAL ECONOMICS

It is, first of all, the merit of the Classical Economics (regarded as the first modern school of economic thought) to have taken this problem into account, the same problem which has become so complex and important for us these days.

In this particular case, the famous work of Malthus (1798), “Le Banquet de la Nature” (The Banquet of Nature), bears a great importance. Those who were born in a world which had already been populated, are requested to leave the nature, which can even execute him/her, if necessary. It is also highlighted, among others, the situation in which nature dominates the mankind (which represents the entire society) and all the consequences and ideas that may spring from there. These conceptions gave birth to one of the most persistent and conservative ideology concerning the environment together with its problems.

The Neo-Malthusianism ecological Theory is indeed very popular today among those who believe that the present state of the environment is in great danger because of the “demographic explosion”, taking place at the moment in the developing countries.

J.S. Mill (1848) also makes a very important contribution to the development of the relation between economy and environment, as his studies are considered to be not only one of the last chapters of the Classic Economics, but also the starting point of its decline. The English thinker brings up, as a new aspect, the link existing between life quality and nature’s influence on the social and economic life. His merit, in this case, consists of changing the initial point of view grounded on the limited character and on recognising the importance of some subjective, unapproachable elements such as those that belong to nature.

2. THE ABORDATION CONCERNING THE CONCEPT OF ENVIRONMENTAL PROTECTION - NEO-CLASSICAL ECONOMICS

The first systematic analysis of the pollution phenomenon, economically speaking, was to be compiled by A.C. Pigou in the paper entitled “The economics of Welfare”, 1932. He came up with important methodological premises that applied to the “negative externality”, thus foreshadowing the theory of the “internalisation of external costs” involved in the process of production, especially taking into account the side-effects of the pollution of the environment.

However, complete solutions to all these problems won’t be found until 1960, when, as a result of the beginning of the ecological crisis, we

assist to a general, continuously evolving establishment of the report between economy and ecology.

The Neoclassic thinking is awarded the merit of having invented the notion of “ecological economy” as a new field of research with an interdisciplinary and innovative character. Works such as “Nous n’avons qu’une terre” (“We only have a planet Earth”) (Ward B., 1964), or “Stop growing” (written and published in 1972, under the aegis of the Club of Rome) have fuelled the fears shared by the public opinion about a future possible major ecological catastrophe, strongly linked to overpopulation, pollution and natural resources exhaustion.

The thesis of the complete stoppage of the economic growth, the so-called “zero-growth” economy, supported by the American economic moves and spectacularly theorised by specialists, was criticised for various reasons and, eventually, abandoned. After many debates, everyone reached the conclusion that it was better not to look for a way of stopping the growth, but for a means of redefining it so that the progress would act pragmatically and carefully towards the necessity of conserving the environment.

The growth in quality and not exclusively in quantity tries to find good technology and better harmony between man (society) and environment (nature).

3. THE ECO-DEVELOPMENT OR THE SUSTAINABLE DEVELOPMENT

The ONU conference from Stockholm regarding the environment (June, 1972) and then the World Conservation of Nature Strategy (launched in 1980, by the International Union for Conservation of Nature – IUCN) have attempted to firmly define the characteristics of a durable way of development, in favour of protecting and conserving the environment. After a time of relative stagnation during the years of the Energy Crisis, the topics of “eco-development” and “sustainable development” attract again the specialists’ and the international governance attention at the end of 1980s.

The concept of Sustainable Development itself, mainly popularised through the report of the World Commission on Environment and Development – WCED (the so-called “Bruntland Report”) entitled “Our common future”, emerged in 1987, and reflects a new degree of economic understanding of the ecological problems.

Traditionally, an increase of GIP is considered to be the sign of progress, its diminishing indicating the state of recession. This type of estimate is not always accurate; a higher rate of natural resources exploitation results in an increase of GIP, without having the same positive effect on the worldwide population.

In fact, ignoring the natural capital and the estimate of its value can have side-effects on the evolution of the national income. This present state

may cause impoverishment of the future generations; the present generation is consuming at the moment a part of the national capital which will not be available to the ones who will inhabit this planet in the future.

The concept of sustainable development has been largely explained by the English economist David Pearce, who stated that each generation, should pass on at least as much "capital" as it inherits. If a generation doesn't obey this rule, the development will not be sustainable anymore, as each generation will end up impoverishing more and more the future ones. The capital is defined by two parts: the natural capital (the environmental capital: environment quality and the stock of natural resources) and the man-made capital. In order to succeed in maintaining its value, we have to make sure that the diminishing of the natural capital will not exceed the growth of the man-made capital.

The concept of "sustainable development" was presented at international level in the documents of agreement signed at the World Conference on Environment and Development held in Rio (3 June to 14 June 1992), mentioned especially in the Declaration and Plan of Action entitled "Agenda XXI".

The terms of "eco-development" and "sustainable development" have been regarded from different perspectives. Apart from the strictly economic meaning, they both have many other interpretations. Hereby, the "eco-centrists", whose main goal is protecting the environment, are against the "anti-eco-centrists", who perceive the environment only through its utility for the mankind.

Among the latter, we can distinguish the "liberals" (such as Solow, Tietenberg etc), who are convinced that the mechanisms of the market economy will adjust by themselves, adapting to the long-term requests of the environment, and also the "reformers" (Pearce, Bishop, Turner), who insist on the state of marketing myopia towards the complexity of the regulatory mechanism of the biosphere and suggest a massive public intervention. Finally, the "radicals" (Lele, Brown etc) sustain a re-evaluation of the actual options available as far as development and consumerism are concerned.

In its present state, after having firmly established its fundamental elements and purposes, including at international level, the concept of "sustainable development" must be put into practice.

4. ECONOMIC MEASURES FOR THE ENVIRONMENTAL PROTECTIONS

Protecting the environment through economic measures has been one of the main concerns of the ecological thinking and strategies. This main goal has been the incentive of many theories and practical experiences, developed at national level.

The potential sources of pollution do not also take into account the costs implied by the pollution produced by them, but only the costing they have to pay for; moreover, since the efforts made for maintaining a clean environment bring advantages to those who do not contribute to their financially supporting as well, there is the temptation of benefiting from such “free of charge opportunities”.

Similarly, when the markets cannot promptly reflect the benefits brought by the conservation of biological diversity (biodiversity) or by rescuing certain species from getting extinct, it is very unlikely that the private owners should be willing to financially invest in protecting the environment. Consequently, without the state intervention, the environment cannot be efficiently conserved and protected.

The attempt of improving and developing this type of concept around Europe (especially through OECD and CEE) has been pointed out by imposing a stimulation policy, based on the economic, judicial principle “the polluter – the payer”. It mainly stresses the request that the polluter should financially cover the real price of the reduction or the elimination of the pollution that he has caused, giving him, at the same time, the freedom to choose the means that he is going to use in order to abide the level of pollution that is legally accepted or the quality norms that apply to his business (company, product).

The national legislations and the policies of different states have experienced and applied a series of economic and fiscal principles such as taxes, subventions, consignment systems and “pollution scholarships”.

5. THE TAXES

Taxes are frequently used for penalising the products and activities that harm the environment. Sometimes, when the purpose is limiting the consumption of a product and not necessarily banning its production, additional taxes, which will raise its price, are applied. This measure is considered to be a bureaucratic one.

Being applied in many countries, but under different circumstances, these taxes usually have two main goals. First of all, funds can be raised for a specific purpose; in this case, the taxes’ level is quite low (for example, the taxes imposed on petroleum and chemical products from the USA, which fuel the Fund of Resorption of the Dangerous Waste). Secondly, these taxes can trigger a responsible behaviour towards the problems concerning the protection of the environment. To stimulate this type of behaviour, it is necessary that the taxes level should be raised, thus making these fees be perceived as a sanction applied to people lest they should not obey the rules for protecting the environment.

The evolution of the fiscal income of the Administration of the Environmental fund which comes from taxes imposed on different types of pollution has been quite eloquent between 2009 - 2011.

Tabel 1
Thousands of lei -

	2009	2010	2011
FISCAL INCOME AND OTHER FEES AND TAXES	4.537	4.763	8.290
a contribution of 3% of the income obtained from selling iron waste and non-ferrous waste, as well as goods that were to be destroyed, earned by the owner of the disposable waste, respectively the owner of the goods, physical or legal person	1.462	1.800	4.750
taxes imposed on the level of pollution caused by the emissions released into the atmosphere by the economic operators who own stationary sources whose use affects the environmental factors	919	1.050	900
a contribution of 2 lei/kg, owed by the responsible economic operators for the difference between the annual objectives of capitalization or incineration of the packing waste mentioned in the valid legislation, conducted in specially designed equipments with backup energy power	1.800	1.200	2.000
a contribution of 2% from the value of the substances classified in normative acts as being dangerous to the environment, introduced on the market by producers and importers, except for the ones used for obtaining certain drugs and medicines	97	105	215
a contribution of 3% from the sum of money which is annually paid by the administrators of the hunting fund for its sensible management	7	8	25
a tax of 0,2 lei, known as the eco-tax, which is worth 0.2 lei for each banana-handle bag or singlet bag, made from non-biodegradable materials, bought	252	600	1300

Source:

- Decision no 1561 dated 9 December 2009 regarding the approbation of the rectification of the incoming and expense budget of the Administration of the Environmental Fund for 2009
- Decision no 117 dated 16 February 2011 regarding the approbation of the incoming and expense budget of the Administration of the Environmental Fund for 2011
- Decision no 82 dated 5 February 2010 regarding the approbation of the incoming and expense budget of the Administration of the Environmental Fund for 2010

6. THE POLLUTING LICENSES

Another important category of economic measures taken for the protection of the environment is formed by licenses, pollution rights (tradable, transferable) referred to as polluting licenses. They are based on the principle that every increase in the level of emissions or in the amount of natural resources used must be compensated for through an equivalent, or sometimes even bigger decrease in the quantity of emissions. For example, when the law sets a certain limit of the pollution levels for a given area, the polluting company can expand its activity unless the total level of pollution grows. Consequently, the company must buy the pollution rights or licenses from other companies or factories that exist in the same area and which are requested to reduce their emissions by a quantity equal to the additional pollution emitted by the new activity.

CONCLUSIONS

I personally think that, in the context of the present modern world, the understanding of the evolution of the economic instruments applied

nowadays and the reasonable foresight of the orientation changes in the environmental domain request that we should also take into account the transformations which occur in the political context of their applicability. Regarding the entire matter from a political point of view, we discover that it is necessary that countries should be integrated in unions and that we should also try to install a certain state of normalization and harmony, having the aim of finding a balance between the voluntary policies concerning this field. As a result of the project of putting everything into practice, we will try to consolidate, on a larger scale, the knowledge of the side effects, the causes of the environmental problems, together with the possibility of ensuring that the environmental taxes, fees, authorisations, agreements and legislation will be respected

Immediate action is compulsory so as to take into consideration the sustainable economic growth, as far as the environment is concerned, the prevention of the long-term negative effects on humans' health and the probably irreversible deterioration of the natural habitats. It is necessary that we should forget about our preference for realising an unsustainable economic development in favour of identifying new solutions to solve the problems raised by the protection of the environment, respecting, at the same time, the principles imposed by a sustainable development.

Acknowledgments

This work was cofinanced from the European Social Fund through Sectoral Operational Programme Human Resources Development 2007-2013, project number *POSDRU/ CPP107/DMI 1.5/S/77082*, "Doctoral Scholarships for eco-economy and bio-economic complex training to ensure the food and feed safety and security of anthropogenic ecosystems".

REFERENCES

1. Barde J.P., 1992, *Economie et politique de l'environnement*. Presses Universitaires de France, Paris, pp. 332- 411.
2. Baumol W.J., Oates W.E., 1988, *The Pigouvian Taxes*, Maastricht, pp. 58-67 Esty, D. (1999), "Economic integration and the environment", in N. Vig and R. Axelrod (eds), *The Global Environment: Institutions, Law, and Policy*, Washington, DC: CQ Press. pp. 82-123.
3. French H., 2000, „Coping with Ecological Globalisation”, *State of the World 2000*, Worldwatch Institute, Washington D.C., pp. 29- 69.
4. Hillebrand B. 2001, *Fields of Action and Options on Sustainability*, Düsseldorf, Germany, pp.28-42
5. Malthus, T., 1798, *An Essay on Principle of Population*. Modern edition published 1983. Londra, Penguin Books Ltd., pp. 37, 54-84.
6. Mill, J.S. 1848, *Principles of Political Economy with some of their applications to Social Philosophy* , edited by Sir WJ Ashley, 1992. *Reprints of Economic Classics*. New York: Augustus M. Kelley, pp. 34-68.

7. OECD, 2001, „Environmentally Related Taxes in OECD Countries: Issues and Strategies”, OECD: Paris, pp. 47-94.
8. Our Common Future, 1987, WCED, Oxford University Press, New York, pp.4-18.
9. Panayotou, T., 1993, “Green Markets: The Economics of Sustainable Development”, San Francisco: Ics Press., pp. 32- 55.
10. Pearce, D.W., Moran, D., 1994, “The Economic Value of Biodiversity.” London: Earthscan Publications., pp. 27- 66.
11. Pearce D., Turner R., 1994, Economics of Natural Resources and the Environment, The Johns Hopkins University Press, Baltimore, pp. 103-154.
12. Pearce D., 1993, World without end. Economics, Environment and Sustainable Development, Publish for the World Bank Oxford University Press, pp.45-48.
13. Popescu, Gh., 2009, „Evolution of Economic Thought”, 4th.Ed, Bucharest : C.H.Beck Press, pp. 63-97.
14. Pretschger L., 1999, Growth Theory and Sustainable Development, Cheltenham, UK; Northampton, MA, USA, pp. 237-254.
15. Richardson J., 2001, European Union, Power and Policy-Making, Ed. Routledge, London , pp. 23-47.
16. Rowthorn, B., Brown G.M. Jr., 1995. Biodiversity, Economic Growth and the Discount Rate. In The Economics and Ecology of Biodiversity Decline: The Forces Driving Global Change , edited by T.M. Swanson. Cambridge: Cambridge University Press, pp. 25- 48.
17. Solow R., 1986, On the Intergenerational Allocation of Natural Resources, in "Scandinavian Journal of Economic", pp. 141 – 149.
18. Tietenberg, T., 2000, „Environmental and Natural Resource Economics”, 5th Ed, Addison Wesley: Reading, Massachusetts., pp. 15-46.
19. UNCTAD, 2000, Integrating environmental and financial performance at the enterprise level, U.N. Geneva, pp. 21- 56.