ENVIRONMENTAL SUSTAINABILITY - INTERNALIZATION OF ENVIRONMENTAL EXTERNALITIES

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Abstract: *Economic assessment of environmental damage and estimate the negative externalities are of particular importance aimed assigning monetary values to use. In economic terms, using produce cost environment where there is conflict between uses, and / or quality of a good is affected beyond measure considered tolerable. This means that the environmental good in question is a rare good economic sense. However, in addition to the direct costs of use, there are also indirect costs - negative environmental externalities that are highlighted in particular the phenomenon of pollution, when appearing as economic damages are not compensated financially. Monetization externalities should be performed when there are external benefits or costs, and they are not included in the financial analysis, or can be highlighted by using conversion factors.*

Keywords: *industrial ecology, internalization, environmental externalities, environmental equity, reducing emission, damages.*
JEL Classification: *Q52, Q53, Q57.*

1. Introduction

When inventories savings / resources are limited, income level can influence the level of investment to internalize externalities. Natural resources, climate, genetic and psychological constitution of the population can also influence the opening of the company by tolerating externalities.

Therefore, in a competitive market, the price does not reflect the total cost or full benefits of production / consumption of products / services, so we hypothesized that both the use of resources and generation of waste or producing an environmental impact are issues to be taken into account in all economic calculations: that should be included in the costs and prices of products / services provided.

Neo-classical economy expanded by concerns of "growth" and "equity", but so far has not found a solution to harmonize between these goals. If global environmental degradation is carried out on behalf of consumption, the market mechanism can not be the correct path. Therefore the company needs to establish a set of explicit limits the level of exploitation of the environment as a "social minimum" or "limited ecological opportunities." Once this limit can explore, through market mechanisms, the most appropriate solutions to internalize externalities.

2. Environmental externalities at global level

Recognized and established economic theory shows that any voluntary exchange of raw materials, products, services, ideas etc. is a mutual benefit for both parties instead. From the perspective of those affected by the exchange, the effects can be negative (pollution) or positive. Economists who launched the "laissez-faire" (Friedrich Hayek, Milton Friedman) made a number of references to outsiders watching them as "effect on its neighbors" or "abundance", although externalities were neither necessary nor localized for that period.

When not exploited all the gains from trade (gains from trade) shows what neoclassical theory is called market failure. Market fails because it does not produce optimal results. Because externalities, it is said that markets fail, since production deviates from the optimum level, so there ineffectiveness. Specifically, the production of too few goods or too little information is considered a market failure if the total cost of production

is less than the benefit of all those who consume them. The classic case of negative externality is pollution. Too much pollution is a market failure when the cost to the firm of pollution reduction is less than the benefit to the population.

Marketing rights tradable pollution permits or environmental policy instruments are increasingly used for pollution control. They are considered as additional mechanisms for just outside the traditional framework of order and control measures that establish mandatory requirements for operators of industrial installations explicit through licenses. Additional mechanisms may be used successfully to meet industrial performance with sustainable development requirements. They allow companies to trade the right to emit specific pollutants pollution.

An economic instrument imposes a financial incentive (a tax) in proportion to the "undesirable activities" (quantities of pollutants emitted or quantities of resources used).

3. Evaluating the effectiveness of policies in terms of environmental externalities

There is considerable support for encouraging such instruments granted by the EU Council, which seeks to integrate sustainable development into EU policy in the industry. Examples include: energy and carbon taxes, fees for waste disposal in landfills, taxes on Climate Change. Economic instruments can have a simpler scope, such as differentiated charges for unleaded petrol and the lead. Such economic instruments integrate very well the 'polluter pays' favoring any industrial process generates less pollution. However, for reasons of political acceptability, such charges cannot be excessive and as a result, there may be a limit to the scope of activities that may apply.

A common solution, however extreme, is the tacit acceptance of environmental costs through political processes. Governments are elected to represent the citizens and find political compromises between various interests. Laws and regulations may take the form of rules of "command and control" (as well as setting standards, objectives or procedural requirements) or price reforms ambient (environmental levy, tradable pollution permits or creating markets for products / environmental services). Sometimes internalization of externalities can be achieved by agreement between the parties.

Such agreements have been formalized in a market for offsets - in fact, the compensation became mandatory for us major sources of pollution in areas with high pollution. Pollution allowance trading means that existing firms in an area with high pollution, can reduce their emissions voluntarily; Instead they would get "credits" for reducing emissions. These credits can then be sold to companies wishing to settle in the area. Firms us can buy credits for reducing emissions for each unit of emissions they will produce.

However, such compensation is not sufficient to reduce pollution to acceptable standards and policies are needed to supplement the so-called "political bubble" that have been introduced to meet the major industries.

The concept of marketing bubble rarely applies outside a company. However, the concept can be expanded from an industrial society to an entire region and several companies. Standards are set, and companies are encouraged to reduce their pollution beyond the standards required to create emission reduction credits. Such credits are stored for later use (in a bank emission), when a company wants to expand, they can be sold to another company which does not meet the standard set.

If global environmental externalities, the relative roles and responsibilities of developed countries and developing gains importance because they are in different stages of development and importance associated with the development of environmental protection varies.

States should cooperate to promote a supportive and open international economic system that would lead to economic growth and sustainable development, a more adequate framework for the problems of environmental degradation. Exchange policies measured as environmental purposes should not constitute a measure of arbitrary or unjustifiable discrimination or a disguised restriction on international trade.

Responsibilities of common but differentiated recognized in multilateral trade-related agreements (Uruguay Round), ozone depletion (the Montreal Protocol), climate change (Framework Convention on Climate Change) and biodiversity (Convention on Biodiversity). There are also special programs for providing financial support and building capabilities for developing countries by agencies such as United Nations Development Programmer United Nations Environment Programmer and Global Environment Fund.

But there is limited success in terms of technology transfer supportive environment to developing countries. Many developing countries are concerned about the use of environmental standards by certain developed countries and non-tariff barriers. Such trials would erode the comparative advantage of developing countries in exports of labor-intensive manufactured products in processed food such as skin, leather and textiles.

The main responsibility of the regulator to the environment is to decide how to allocate responsibility for control between sources, to design ways to implement these decisions, to monitor compliance with the results of regulations and establish enforcement action and / or coercion if they are not respected.

The fundamental problem in addressing the mismatch between the command and control capabilities and responsibilities is. These, along with stimulating the allocation of responsibility for the profitability cost control (control authorities) have too little information available to achieve the objectives. Although there may be the best information in the determination of cost-benefit, business managers have little incentive to voluntarily accept responsibility for their actual costs or pass impartially costs related information to the responsible authorities; Under these conditions they can assume only the actual costs. In addition, managers of enterprises are encouraged to accept responsibility at a reduced level of control if there is a possibility to maintain or strengthen its competitive position.

In this type of environment policy does not seem surprising if the allocation is not command and control, and by itself cannot become a form of return on actual cost. What may really surprising in light of the complexity of the topic, is that this form of return on cost is not an unreasonable target for further action.

In essence, this problem is reduced to the analysis, strategic and tactical measures needed to be implemented in the world to reduce pollution levels, taking into account the differentiated Pollution produced by the world states.

There are some countries where aspects of emission allowances, their marketing and the principles and practices of application is a field of study and analysis already experienced, which caused many controversies in order to clarify financial and monetary problems ambient.

Evaluating the effectiveness of policies tradable permits is an inexact process and ongoing. However, it is essential if the design program of tradable permits will improve in the future. His analysis here is nuanced and emphasizes that the success of the program depends, among other things, the regulation of existing programs, the cost structure of industries involved interaction with other markets, and program design. It believes that marketing programs tradeable permits, generally leading to reduced emissions and lower costs. There was, however, a wide variation in savings from program to program and cost cutting shows that price is negotiable permits very sensitive industry involved.

In principle, permits traded information and solve problems that are represented stimulation controls addressed so as to allow each participant to play the role that suits him best. Regulators appear certain that these sources benefit from incentives by setting goals and enforce their pollution. By leveraging the flexibility inherent characteristic of marketing issues pollution permits, in order to obtain the lowest cost, whose limits are set by regulating authorities responsible, collective sources of pollution causes lower total costs from all sources of pollution. In principle, the incentives are compatible determined by self-interest, in this case, with cost effectiveness.

Although the operating principle of tradable permits is generally valid for all categories of polluters, some of the implementation details (such as the design permits communicable) depends mainly on the type of pollutant to be regulated. Defining profitability tradable permits and trading system design that is compatible with their allocation varies depending on the class of pollutants. The feature that distinguishes a class different is the relationship between individual sources of emission of pollutants and pollution target.

Through cyber models by indicating subsystems components, linkages between them and control loops occurring, ecosystem analysis can be done in their interdependence with economic systems. Thus, we cannot talk today about a harmonious, sustainable, without state intervention, public authority, the regulatory system in the relationship between economy and environment.

Through cyber proposed model can estimate the costs it has on the environment and on various pollutants can be adopted from the energy industry - for which it was designed - to any company producing externalities. Once calculated these costs, they must be deducted for those who have contributed to pollution, in other words to internalize the externality costs.

Highlighting links between producers and the environment is via a cybernetic model. It will be structured at two levels, namely at the microeconomic level, the manufacturer and the level Aggregates, regional.

Externalities control can be done by imposing bans, isolation and government regulations. These actions vary from one economy to another and within the same country, from one to another externality because the legislation is different and in addition, different location and type of externality producers, as groups affected by them.

The criteria underlying the control externalities are: efficiency, flexibility, ethics and public agencies spending. These four criteria allow intervention in micro or macroeconomic externalities manifestation.

4. Conclusions

In conclusion, the developed countries with potential in terms of financial, economic, human and technological have multiple opportunities to design and sustainable development. At the same time and, at a certain threshold of endurance environment, the issue arises as to the survival of the planet, making it essential globalization sustainable development actions.

But how easy is the national application of the principle polluter - payer for businesses subject to the same jurisdictions on the same territory and who may apply sanctions provided by law, the more problematic is that this principle applies internationally.

In fact, if there is no cross-border pollution mechanisms or motivations that lead states to apply the polluter - payer.

The trend would soon reverse: if nothing determines dimensional externality polluting country to pay (out of possible sanctions under international law). If externality

mutual will be numerous those "free riders" (free riders), for no one is inclined to pay for the public good unless all are convinced that the net benefit of overall cooperation will be higher than that of a policy "every order itself ".

The fact that the principle of polluter - payer rests on sound economic logic does not exclude some ambiguities and difficulties in interpretation, confirmed by international issues. These difficulties require more rigorous definition of the principle of polluter - payer and its field of application.

Even if it becomes a fundamental principle, the principle of polluter - payer should not remain unchanged, but must evolve to become perfect, even to reform for solving specific problems, such as global pollution on the planet. The economic fundamentals of the principle of polluter - payer are solid and directly contribute to the search for a sustainable development process which involves, inter alia, the implementation of devices for evaluation of natural resources to ensure better management and their transmission to future generations.

The principle of polluter - payer should remain a reference, a landmark, the numerous situations in which it will be used for cross-border pollution. A whole set of economic and non-economic motivations may lead to other forms of cost sharing ("principle victim - payer" and "principle of reciprocal compensation").

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