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Scopes of Tax Measures in the Struggle against Pollution in Mexico

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Abstract: The industrial development and urban growth have caused considerable environmental deterioration in Mexico, especially due to the extension of highly polluting production activities. Such scenario has degraded natural resources of the country and also threatens the population. The Mexican State uses in a limited way tax tools that can help to control environmental pollution or to its decline, since environmental charges are only applied to narrowly defined activities. Because in Mexico there is no conclusive evidence that tax measures aimed at reducing environmental damage have that effect, other than tax collection, the goal of this paper is to analyze the number of highly polluting activities which are taxed in Mexico and some of the most visible consequences of those that are not taxed. This is a qualitative study, of documentary type. The result of this research is a reflection on the extent of environmental damage in Mexico and the need to promote a culture of social responsibility in business to diminish the impact on those activities in which the state is ignored and its role is insufficient.

Key words: taxes; environment

JEL codes: H20, Q50

1. Introduction

Increasing environmental problems in the world has forced several countries to design public policies that help to reduce environmental pollution without affecting economic growth. In recent years, various organizations and governments have implemented some legal orders to regulate polluting gas emissions, as well as actions of a fiscal nature that penalize the misuse of natural resources and environmental pollution. Governments have a variety of tools, such as law enforcement to collect environmental taxes, subsidies and environmental regulations. Within these tools, environmental taxes are the most flexible for economic entities from one country when

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determining the least expensive way to reduce the environmental impact through price determination. In this regard, it is established that the application of tax regulations of environmental nature could favor the awareness of economic entities to produce or perform an economic activity without affecting the environment and natural resources.

The growing importance of environmental issues in which our planet is immersed, as well as the key role business can play in them, has led to environmental aspects acquire greater importance for them.

2. Methodology

The research design was not experimental, qualitative, descriptive, applying methods of documentary research, taking references from books, magazines and Internet consultations, as well as sites and/or official databases to consolidate data and information on the subject investigated.

3. Results

3.1 Environment

The development of our civilization has modified, and in many cases substantially, the terrestrial landscape. The cities and towns in which we live, as well as the fields from which we obtain our food have removed the original ecosystem, drying lakes and rivers. We have also led to the extinction of many species and overloaded the atmosphere with gases and pollutants that cause climate changes, all these to settle down and allow our cities and small towns continue to grow. Our impact has not ended there. The products we use in our daily lives come from the exploitation of natural resources of many of the planet's ecosystems. The food we eat, the wood we use for the construction, furniture or paper, plastic wrapping items of modern life, or chemicals used in industry, agriculture or home, all are somehow associated with disturbances and severe damage to the environment. It is no exaggeration to say that our planet has changed, and in many cases irreversibly, with the expansion and development of our civilization. Against the belief of recent times, these resources have been shown to be finite, even though some of them are renewable. The surrounding environment has been anthropogenically modified to enhance what produces more economic wealth or current wellness, often at the expense of future generations.

The Mexican territory has an extraordinary environmental diversity in its nearly two million square kilometers. In spite of its plentiful rivers and its extensive coastlines, its large woodlands, its lake systems and the abundance of minerals, it is not guaranteed that, for example, its people have access to sufficient drinking water,. Human economic activities, primarily, either have affected the availability of quality water and available land for cultivation, or have generated byproducts that affect health, as for instance in communities where opencast mining is practiced. The population has become accustomed to living with the scenarios described above, but with constant complaints to the state, to invest in repairing the damage or in finding or activating alternative measures of supply of contaminated resources.

The authority has traditionally served reactively the problem, which has increased costs to repair damage to nature, so in this study the mechanisms of taxation are analyzed to "cure" the loss, the change, the deterioration, or adverse and measurable change of ecosystems, elements and natural resources of their chemical, physical or biological conditions.

3.2 Taxes

Tribute comes from the Latin *tributum* meaning give, distribute (Mateos, 2004, p. 100). Also defined as

continuous loading in cash or in kind that the vassal must deliver to the lord in recognition of his government or the subject to the State for the attention of the so called public burdens.

Different writers define the tax in the following terms:

Marco Vitti says: “Tax is a part of the citizens’ income that the State perceives to be provided with the means necessary for the production of general public services” (Flores, 2004, p. 417).

Gastón Jeze states: “The tax is a monetary benefit required to individuals by way of authority, permanently and without compensation, in order to meet public obligations” (Faya, 2003, p. 125).

The current Tax Code of the Federation Article 2 says that “Taxes are contributions established in law payable by natural and artificial people who are in legal situation or in fact foreseen by the same and which are different from those identified in Sections II, III and IV of this article.”

So it can be said that the tax is a financial contribution defined in law that the State receives to cover public spending. Tax collection, in addition to the purpose to cover public expenditure of the federation, states and municipalities, taxes can implicitly serve as effective instruments of the financial, economic and social policy that the State has interest in promoting, guiding, directing, encouraging or discouraging certain activities or social practices, as may be considered useful for the harmonious development of the country, as long as constitutional principles which guide taxes are not violated, these taxes are commonly known as non-tax purposes.

3.3 The Tax as a Tool for Reducing Environmental Damage

The tribute as a legal institute is now one of the most efficient instruments of control for changes in the patterns of people’s behavior. Taxation, in principle, did not aim at protecting the environment, that is to say, taxes were created for the sole purpose of raising money to meet the goals of the State, nevertheless, the use of tax mechanisms as instruments of environmental policy is increasingly accepted and remains constant. Quoting Marco Cesar Garcia Bueno it is found that the principle “polluter pays” is the one that justifies the presence of the environmental tax, so the distribution of them comes from the pollution generated by the subject. The polluter pays principle is clearly defined by Aimée Figueroa Neri, who says “it is understood as responsible of polluting, that is, as pollutant, to the natural or artificial person under public or private law that directly or indirectly impairs the environment, or creates the conditions for such deterioration occurs.

There is sufficient evidence to show that pollution rates currently recorded not only affect the quality of life of individuals and their immediate ecosystem, but threaten the survival of future generations. The recognition of the right to live in an environment free of pollution, although not explicit in the Mexican constitution, is a priority.

The principle “the one who pollutes, pays” — “polluter pays”, “chi inquinapaga”, “pollueur-payeur” — is born in economic sciences, with that pretends, in its origin, to reflect in the price of the activities and products, the externalities caused by environmental damage. Otherwise, the use of economic and fiscal instruments in this context is recommended by the Organization for Economic Cooperation and Development (OECD). There is no doubt that environmental protection is a key objective, since it is recognized by international conventions. In the case that the legislator uses tax figures to pursue environmental protection, one can say that these taxes have non-tax purposes.

The main reasons for using tax measures through environmental taxes are:

(1) They are particularly effective tools for direct incorporation of services costs and environmental damages (and their repair) to the price of goods, services and activities that produce them; and to contribute to the implementation of the principle of payment for the pollutant.

(2) They can provide incentives for both consumers and producers to change their behavior in the direction of a

use of resources that do not harm the environment; to stimulate innovation and structural changes; and to strengthen the enforcement of regulatory requirements.

(3) They can increase the rent or tax revenue received by the state, which can be used to improve environmental expenditures; and/or to reduce taxes on labor and capital.

(4) They can be particularly effective policy tools to tackle current environmental priorities.

The OECD says that ecological taxes, called green taxes, too, have the ability to repay certain market failures, with the addition of impact suffered by the environment through polluting goods prices. Also, tax rates lead producers and consumers to have a more friendly or conscious behavior of their environment; they mean incentives for the development of cleaner technologies as well.

In Mexico, little use has been made of taxation to environmental protection, so that there is only the Law on Special Tax on Production and Services (IEPS for its acronym in Spanish), which currently serves as a tool to discourage activities that damage the environment.

The Center for the Study of Public Finance (CEFP by its acronym in Spanish) of the Chamber of Deputies reported that the collection of environmental taxes for 2015, represents 0.3 percent of Gross Domestic Product (GDP) and 2.1 percent of tax revenues estimated for this year. The Mexican nation is the only member of the OECD, with the lower revenue from environmental taxes, a situation that has continued for the last recent years.

3.4 Special Tax Law about Production and Services in Mexico

Special Tax Law about Production and Services in environmental matters aims to discourage behaviors that negatively affect the environment, so that among its various activities it regulates, there are two that are the subject of this study: Tax on fossil fuels and tax to pesticides.

During combustion or burning of fossil fuels, carbon dioxide is released to the atmosphere, one of the main greenhouse effect gases. So to encourage a smaller use and greater efficiency in its combustion, the carbon content of these fuels is taxed at a price that reflects the conditions of the international markets for carbon, so that the social cost of producing polluting emissions to the atmosphere is internalized, and hence, it leads to the adoption of cleaner technologies in the production of goods and services. A carbon tax is the least expensive way to discourage emissions of greenhouse gases that are causing climate change, and to promote greater viability to the development of technologies for energy efficiency and promote the use of alternative energy sources.

Additionally, it is found in the IEPS law (by its acronym in Spanish) a tax on pesticides, primarily to discourage the use of those with strong risks to the environment, to water resources and to food, according to the following rates, depending on the acute toxicity hazard:

- Pesticides category 1 and 2, with 4.5%.
- Pesticides category 3, with 3.5%.
- Pesticides category 4, with 3%.

The Secretariat of Finance and Public Credit (SHCP by its acronym in Spanish) says that with the tax on fossil fuels tries to reduce emissions of carbon dioxide, the main greenhouse gas; while with a tax on pesticides means a decrease in their use in order to reduce the impact on the environment and the health of the population. In the initiative of Revenue Act of the Federation, the Federal Executive states that the additional resources generated will go to energy efficiency, technology and public transportation.

3.5 Environmental Taxes in the World

By comparing environmental taxes in Mexico with other innovative countries in environmental tax policies, we observe various models that could eventually be applied. In Brazil, for example, the Environmental Tax about

the Circulation of Goods and Services (ICMS by its acronym in Spanish) is inter-state and applies a rate of between 7% and 12% depending on the state. Also, the State Tax in Motor Vehicle Property (IPVA by its acronym in Spanish) is calculated according to the value of the car and the municipality receives revenue from that tax. On the other hand, in Chile the Green Tax to mobile sources is applied to new cars, depending on its urban performance and aims to promote the use of vehicles that pollute less. In October 2014, Chile became the first South American country to establish a pollution tax, the tax charged US$ 5 per ton of carbon dioxide (CO_2), however, it will not take effect until 2018.

In Ecuador there is, in conformance to the Law of Environmental Development and Optimization of State Revenue, a tax to environmental pollution caused by the use of motorized road vehicles.

Finland created for the first time a carbon tax, also decreased the income tax and social security contributions. Norway instituted a CO_2 tax, which gradually expanded to cover 64% of the emissions of this gas. As an additional measure, a decrease to income tax was applied. Sweden conducted an environmental tax reform, taxes to CO_2, sulfur and nitrogen oxides (NOx) result in a significant reduction to income tax. Germany increased taxes in minerals, fossil fuels and electricity and reduced social security contributions. Italy, meanwhile, restructured taxes on minerals and fossil fuels. Taxes to gasoline, diesel, coal, oil, gas were increased and is currently undergoing a reduction in labor taxes (Salas, 2007).

3.6 Culture of Social Responsibility in Enterprises

The term social responsibility involves making commitments of the individual or organization to the surrounding environment in order to achieve joint goals. However, such an attitude is not per se given, except in very specific and outstanding cases. It is known as a socially responsible entity the one that meets a set of rules and principles relating to the social, economic and environmental reality that is based on values that help it to be more productive, its guidelines are based on human dignity, common good, social participation, and especially the care of the environment.

However, such schema-that of “socially responsible company” — should not be used as the only means to fight pollution caused by industrial production, since the implicit scheme in that name is to subsidize behaviors that go against the spirit of the policies implemented by the OECD, which are based on the already mentioned concept that “the polluter pays”.

The promotion of social responsibility of companies in the matter of environmental protection should include, therefore, the diffusion that to stop polluting is no cause for monetary gain, but harming the environment does implies a cost equivalent to the damage caused.

4. Conclusions

In recent decades, the population growth in Mexico and its concentration in large urban centers revealed the scarcity of natural resources and the difficulty in using the existing, primarily water due to undergoing pollution.

This point had been ignored by society even though in most cases is the result of persistent and allowed economic activity, because there is no culture of environmental responsibility.

In 2013 the OECD compared the environmental performance of member countries and shows that Mexico, out of thirty-four countries belonging to this organization, proved to be who collects less in terms of environmental tax, and also the one who most subsidized actions that alter the ecological balance, such as fuel consumption or extensive farming, destroying ecosystems that are home to 12% of global biodiversity. The OECD

estimates that in 2010 Mexico lost about 7% of GDP due to environmental degradation, so the organization has urged Mexico to implement tax measures to solve this problem.

The Mexican state combats environmental damage generated by the combustion of carbon and pesticides only via taxation, when human activities that damage the environment are more than that number and could become more harmful. Suffice it to mention the example of the widespread use of non-biodegradable plastics, which are deposited to be discarded without any treatment, even though their life before degrading is hundreds or even thousands of years. Another Mexican example may be that of the intensive extraction of metals like gold which is made outdoor by using poisonous chemicals such as cyanide. It can even be pointed out the extraction of limestone for cement manufacturing which fills the environment of the communities where they operate with suspended particles, or swine production, which pollutes nearby water bodies.

The practice of other countries shows that it is necessary to affect the taxation of activities that harm natural resources, so that the authority recovers resources that must be invested in the remediation of damage, while at the same time that taxation discourages the used of methods harmful to the environment, by making viable to techniques that today are not profitable but which could be with a high-tax to current practices.

As regards the social participation of companies, there is not an intrinsic motivation in private organizations to contribute to community development or environmental protection, among other things, so they require specific public policies aimed at creating a culture of environmental responsibility, including the rational use of natural resources and a commitment to reduce and eradicate the damage that economic exploitation of resources has already caused with methods whose profitability is based on the destruction of the environment.

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