

## MECHANISMS OF ENVIRONMENTAL TAXATION IN TRANSITION GLOBALIZING ECONOMIES

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**Abstract.** The authors affirm that with the globalization of the world economy it is necessary to introduce the mechanism of environmentally sustainable economic functioning of the country. The article maintains that active use of environmental taxes must help to reduce the overall level of environmental pollution and increase production of environmentally clean products.

**Keywords:** "green" economy, international integration, environmental taxation.

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### Introduction

Environmental taxation remains one of unsolved problems of nowadays. However, according to the scientists, we can establish the formation of the Institute of Ecological Taxes for today. O.O. Veklych, Z.S. Varnaluy, T.P. Galushkyna, V.S. Zagorodskuy, P.V. Melnyk, I.V. Rosputenko, I.M. Sinyakevych, K.I. Shvabuy, V.V. Yurchyshyn investigated theoretical and practical issues in the sphere of environmental taxation.

The mechanisms of environmental taxation has not been worked out completely. The issues require further study in conditions of world economy globalization. The study is based on the use of systematic and integrated approaches to determine the main directions of forming the models of green economy as an element of sustainable development.

The aim of this research is to determine global formation tendencies of environmental taxes to improve the ecological and sustainable development. Accordingly, the goal should be to solve problems such as determining the nature of environmental taxes, their composition and influence on the content of local budgets.

**Taxes that are conventionally referred to as "environmental" or «Ecotax» exist in all the developed countries.**

According to the European Union the share of environmental taxes in Gross Domestic Product amounted to 2.46% in 2011 that equals to 304 268.34 million euro (Economic Reform Program, 2010).

The idea of environmental taxation appeared in the writings of economist-theorist Pigou, who proposed to charge taxes from enterprises-pollutants and provide subsidies to those who reduce emissions into the environment. Scandinavian countries were the first to begin applying this idea in the eighties. Ecological taxes are considered to be taxes on

environmentally hazardous economic activities there. Proclaiming pro-European integration Ukraine adopted a large number of laws that are directed to protect the environment. First of all, there are such laws of Ukraine as: "Environmental Protection", "Air Protection", "Animal Protection", "Flora Protection", "Ecological Expertise" and codes such as water, land and forest code, as well as the code of Ukraine about minerals. The legislation found it necessary to discipline the actors in the field of environmental protection by setting the environmental tax in the Tax Code of Ukraine.

Natural rent is an income that arises in the process of appropriation of natural gifts. This rent is obtained by those economic actors who have deposits of the relevant minerals at their disposal. The scarcity of natural resources on the market resulted in their rapid prices growing. Cash surplus caused by the price increase goes to the owners of the respective resources only because they have a monopoly on these resources and, consequently, they regulate the admission of other economic entities to production and further use of these resources. The rent would be a godsend for the whole human civilization, if the relations of private property did not envisage the possibility of exclusion of all other economic entities from a given natural resource

The interaction between society and nature is another aspect. Insatiable desire of certain members of society to increase their income continuously by engaging in the economic process more and more natural resources, causes the formation of large amounts of waste, which ultimately worsens the condition of the natural environment. Made profit is at the same time accompanied by environmental losses. Nature can neutralize some of the waste on its own. However, in case when the amount of wastes exceeds the capacity of nature to neutralize them, the pollution of the whole environmental structure may occur. This pollution affects the lives of not only those who exercise the corresponding emissions, but the society as a whole. Thus, we can talk about the emergence of environmental "antirent", which is accompanied by the excessive use of natural resources and excessive pollution of the environment.

According to Section 14.1.57 of the Tax Code, the environmental tax is the national compulsory payment levied on actual emissions to air, discharges into water pollution, waste disposal, the actual amount of radioactive waste temporarily stored by the manufacturers, the actual amount of radioactive waste generated and the actual volume of radioactive waste accumulated before 1 April 2009 (Tax Code of Ukraine, 2010).

In accordance with § 240.1 of the Code, taxpayers are entities, which do not conduct economic (business) activities, government agencies, public and other companies, institutions and organizations, permanent establishments of non-residents, including those that perform agent (representative) functions in respect of non-residents or their founders, which are engaged in the emission of pollutants into the air from stationary sources of pollution, discharges of pollutants directly into the water, waste disposal in specially designated areas or at sites other than the location of certain types of waste as secondary raw materials, the generation of radioactive waste (including already accumulated ones), interim storage of radioactive waste influencing the territory of Ukraine within its continental shelf and exclusive (maritime) economic zone.

Recently the development and improvement of the economic mechanism of environmental activities has been carried out in Ukraine, primarily, by the efforts of the Ministry of environmental protection of Ukraine. One of the most important ecological-economic instruments of environmental activities in Ukraine is the fees for pollution of the

environment and the system of the respective funds, which were formed on basis of payments for natural resources.

Licensing system of Ukraine covers all areas of environmental management. The greatest number of permits are issued to enterprises, institutions and organizations in the field of waste management facilities and operations handling hazardous substances.

The environmental charges are imposed on legal entities and individuals that contribute to the degradation of the environment. The objects of environmental taxation are the factors that have direct and indirect impacts, as well as the goods and services that are, or can cause environmental action.

Now the objects of environmental taxes are the energy products, transport equipment and transportation services, volumes of emissions in atmosphere and water, ozone depleting substances, and some scattered sources of water pollution, waste and noise. Numerous groups of environmental taxes related to energy, transport and waste recycling are made up in the EU.

Many European countries have introduced environmental taxes on product which limits the production and consumption of environmentally hazardous, resource-intensive products, and products that are made from rare natural resources. Environmental tax on product is a tax levied on any product, whose production pollutes the environment in one of the periods of the cycle of operation.

Foreign practices of environmental taxation demonstrate the effectiveness of this tool. Environmental taxes are a component of the prices of products, which cause environmental harm, and consumers seem to pay the society an indirect tax for the use of environmentally "dirty" products. Characteristically, the introduction of essential ecological tax on such products eventually displaces it from the market completely.

"Environmental" component of the domestic fiscal system is represented by:

- 1) rent payments;
- 2) payment for the land;
- 3) the fee for exploration;
- 4) payments for special use of natural resources;
- 5) environmental tax (the tax for pollution of the natural environment), which are nation-wide mandatory fees.

You should pay attention to the fact that in Ukraine almost all types of payments in the form of fees, collection and payments related to natural resource use and environmental protection, in spite of their fundamental difference in economic substance and in terms of sources of financing of environmental activities, have the character of tax revenues and are actually ways to increase funds in the revenue part of state budget.

In Ukraine there are no certain groups of environmental taxes that are inherent to the tax system in EU countries. They are as follows 1) the so-called deferred payments, contributing to cover environmental costs (earmarked charges are tax on noise pollution, batteries, income from livestock and others); 2) so-called stimulating commodity, product, or environmentally consumptive goods, which are potential environmental pollutants (incentive charges are taxes on pesticides, detergents, plastics, certain types of fuel, transportation).

The main difference between domestic resource taxation system and the European one is that implementation mechanisms are not completed to address environmental problems and do not create significant incentives for economic agents to environmentally friendly actions. It is clear that a purely fiscal mechanism for collecting funds from nature, ignoring the

regulations, restrictive and stimulating functions, is not conducive to the efficient use of natural wealth.

The distribution of the environmental tax is made under the Budget Code in such way: 53% for special state budget and 47% to the Special Fund of local budgets. Thus 33% of the proceeds of the special fund of the state budget allocated for the financing of targeted ecological modernization projects. Financing of the nature reserve fund is made from local budgets as a residual.

According to the scientists, nowadays we can see the increasing trend of the role of environmental taxes and stimulating activities for economic development in industrialized countries, where the share of environmental taxes in total tax system is as follows: Austria - 4.4, Canada - 4.5, Denmark - 3.4, Finland - 7.3, France - 5.4, Germany - 4.9, Greece - 6.1, Ireland - 11.9, Italy - 9.0, Japan - 6.5, Netherlands - 5.5, New Zealand - 6.1, Norway - 10.8, Portugal - 11.5, Spain - 7.5, Sweden - 6.3, Switzerland - 4.7, UK - 8.2 USA - 3.2.

The relevance of the use of environmental taxes in Ukraine makes to refer to the experience of countries where the use of such taxes is successful. Of course, you need to pay attention to the important changes that took place in fiscal systems in developed countries that are now designated by the term "greening".

"Greening" of the fiscal system is an effective means of making success at the same time achieving two major national goals – the revenue of state budget and solving the problems of the environment. In terms of rational criteria for the usefulness of environmental taxes the changes in behavior of economic entities are achieved, which lead to the abandonment of environmentally harmful goods and activities. There is the formation of potential of reducing tax revenues and increasing environmental impact as a result.

Taking into account the experience of countries with developed market economies, the active use of environmental taxes helps to reduce the overall level of pollution of the environment. Moreover, placing an additional financial burden on businesses, environmental taxes help to reduce the costs of pollution control and increase production of new, environmentally friendly products, as well as promote competitiveness and economic position of producer.

The tax on the product is used to increase the financial resources necessary to reduce the environmental harm caused by a product that is taxed. The accumulated funds including taxes are targeted at providing financial support to specific environmental programs and reducing pollution by these types of products. As a result of cost redistribution of financial flows "re-investment income" is derived from the environmental taxation. Thus, other countries have managed to prove ecological and economic impact of environmental taxes and dispel suspicions that it is just another way to increase payments to the budget. Taking these facts into consideration, the importance of introducing such a mechanism of environmental taxation in Ukraine is obvious.

The current economic mechanism of environmental regulation in Ukraine is based on the concept of payment for environmental safety. Benefits of the economic mechanism of environmental management are based on the fact that economic instruments provide basic payments for nature exploiting being the only tool that allows to provide earnings of financial resources in the amounts necessary to eliminate the effects of environmental pollution (Tax Code of Ukraine, 2010).

"Greening" of the tax system is being currently developed due to two trends in the practice of environmental taxes in developed countries. Formation of the subsystem of tax entities environmental fees and stimulating or deterrent nature of charges is the first

traditional approach to the organization of environmental taxation. Multichannel tax system characterized by a large number of taxes and fees is more effective than single-channel single tax and the use of a broad tax base and differential tax rate has a moderate pressure on the companies. The second trend is manifested in the abolition of most payments designed to target conservation funding like in the Netherlands and France. Environmental taxes that are paid into general state budget, are introduced instead of environmental fees and charges. So we can see the process of gradual transformation from targeted environmental payments to the taxes that have fiscal function by combining a number of fees and charges, the "only tax for activities that cause environmental pollution" (Tax Code of Ukraine, 2010).

Trends of environmental taxes in developed countries are directed to strengthening its fiscal properties to centralize financial resources for national environmental programs and decrease the activation of the stimulatory function at the micro level.

The main trends of environmental taxation in Ukraine should be those, which are able to reorient the effect of fiscal instruments from maintenance of environmental pollutants "redemption" to earning incentives in the form of benefits for industrial production, to produce environmentally clean products that correspond to international environmental standards and do not cause negative impact on the environment and health of staff.

These areas are the following:

- a) further intensification of the environmental fees and charges stimulatory function and orientation to achieve optimal value in spending targeted financial resources between national environmental programs and its decentralized use in the real economy;
- b) combination of stimulating nature of environmental taxes and payments with other financial measures of providing methods to improve the environmental safety of production, such as tax incentives, loans for environmental projects, environmental insurance, penalties for violations of applicable environmental legislation.

Countries that have achieved the greatest success in the development of environmental taxation, are Norway, Sweden, Finland, Denmark, the Netherlands and the United States.

Denmark is a prime example of an effective system of environmental taxes. This country is one of the recognized leaders in the use of environmental taxes to deal with wastes. The tax instruments of Denmark include a tax on waste disposal, taxes on the product, and a system of "bail-return", which is not usual for us in "Tax" form.

However, the Danish system of environmental taxes on waste is one of the most efficient in the world. Convincing figures are the following: only 12.5% of the waste generated in the country at the landfill was not removed in 2011, and this share is reducing. In this case, the tax rate is set according to the degree of environmental acceptability of the method of waste management. Waste producer shall pay DKK 375 (EUR 50.34) for every ton of waste that is subjected to disposal in landfills while a ton of waste that is incinerated costs 330 DKK. Thus the tax on recycled or re-used waste had is not charged.

According to the Danish Environmental Protection Agency, environmental taxes are the most important economic instruments of waste management. The experience of Denmark indicates that environmental taxes can be successfully used to solve the waste problem. The significant economic and environmental effect is achieved which indicates the processing of more than 60% of the waste. Thus, at the beginning of the 21st century 7 million 285 thousand tons of waste were processed from 11 million 855 thousand tons of waste generated in of Denmark, 3 million 64 thousand tons were burned and 1 million 489 thousand tons were disposed in landfills. This is a weighty environmental achievement of environmental taxes. The factors that led to the high efficiency of environmental taxes in respect of waste in

Denmark are their scientific validity, the sequencing of environmental and economic policies, combined with other equally important ecological, economic, administrative, legal and educative tools of environmental policy (Economic Reform Program, 2010). Considering all abovementioned, we must implement this experience in Ukraine more effectively.

The effectiveness of the environmental tax depends on the ability to define a satisfactory basis for payments. The main problems with the definition of taxable items are related to taxes on resources and final products and similar to taxes on sales and excise taxes. Determination of the base of environmental taxes on emissions, discharges or location of solid waste raises the problems of its measuring and monitoring (Law of Ukraine: The environmental protection, 1991). One of the characteristic features in the case of taxes on discharges is that substances which don't have intrinsic value are taxed. If resources or finished products are the subjects of taxation, then there is a certain amount of taxable items. Goods may be taxed in the production and sales. Moreover, most of the finished products and resources have identified standards and economic instruments to measure them. Discharges and emissions are much more difficult to determine, because not only emissions are important, but also their constituents (contaminants). Thus the determination of taxable amount of emissions and discharges should include a specific set of measurement and standard procedures which would ensure the uniqueness and validity of the tax use.

Environmental taxation is generally considered mechanisms to counteract competition in international markets, a mechanism that reduces the competitiveness of the state because of the costs of environmental measures.

Results of the study of the current state of the system of resource taxes in Ukraine made it possible to single out certain contradictions and summarize the problems of its functioning. Above all are:

- leveling in tax revenues as the main tool of domestic financial system of nature and environmental protection;
- existence of a significant gap between the proclaimed principle of "polluter pays" fees and standards formation for the pollution, on the one hand, and the amount of damages and the actual costs for reimbursement, on the other;
- absolute figures understating norms of payments for special use of natural resources and fees for environmental pollution;
- depreciation charges for special use of natural resources and fees for environmental pollution;
- profound differences in marginal tax rates on pollution standards;
- complex cumbersome calculations of environmental and natural resource payments, instability of statistical reporting system and control of natural resources accounting data and revenue accounting of payments;
- non financial legal aspects.

Thus, the current environmental tax system of Ukraine needs further reforming and development aimed at reducing the negative impact of the national economy on the environment, natural container unit of GDP, to stimulate the transition to sustainable development.

The basic elements of the natural resource management will continue to remain fees, payments for the special use of natural resources (minerals, water, land, forest, biological), charges for environmental pollution. Tax levers as penalties for violations of environmental laws are ignored. Consequently, state budget and extrabudgetary funding environmental activities important functional elements of economic environmental control systems remain.

Building an effective economic mechanism should be grounded on the basis compensation that provides restoration of natural resources, environmental management and regulation of their use.

### Conclusions and suggestions

Strategic vectors improving legislative and regulatory fields along the path of the principles of natural resource management should establish effective natural resource management and consider the feasibility of more prudent planning in this area, which, first of all, must destroy the existing imbalance between resource revenue and losses for environmental purposes, secondly, determine the lower limit of regulatory indicators in the state (local) budgets, thirdly, establish permanent "feedback" in this context.

Gained experience in international practice and directions for environmental policy show that the unified system of taxation and charges may be a progressive form of regulation in our country in dealing with issues related to improving of the environmental management. In this respect, it is necessary to implement tax reform, which is based on the gradual transition from the existing fines to direct natural-resource taxation. Moreover, it is perspective to use the system of tax exemptions and tax rules that exist in foreign countries regarding stimulation of environmentally clean, safe products production. As for the production of environmentally hazardous products and goods, they must limited.

Thus, a new socio-ecological approach is necessary in justifying the size of the environmental tax which should take social, economic and environmental requirements into account. However, the main criterion in determining the environmental tax should be correlation between needs of society and opportunities of nature. As demand and supply of natural resources in different parts of the globe are not the same, the environmental tax should be geographically differentiated taking into account the heterogeneity of the environment and human impact on it.

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