

Mokrišová Viera

PhD student

Faculty of mining, ecology, management and geotechnologies

Technical University in Košice

Letná 9, 04001 Košice, Slovak Republic

viera.mokrisova@student.tuke.sk

SOME ASPECTS OF THE HARMONIZATION OF ENVIRONMENTAL TAXES IN THE SLOVAK REPUBLIC

Abstract: In view of the continuing technological advances, the increasing life expectancy of the population increases the burden on the environment. The society perceives these changes as a problem that it seeks to prevent at global as well as European level. Economists propose solutions designed to influence the behaviour of economic subjects. One of the instruments applied by the state in this area is environmental taxes. Ultimately, they should be involved in improving the quality of the environment. In line with EU membership obligations and in terms of harmonization and approximation, environmental taxes and charges are levied on products that have a negative impact on the environment. Polluters should be motivated in this way to save or to prefer more environmentally friendly substitutes. Over the past half-century, environmental taxes have evolved considerably. They have gradually found their place in the tax systems of European countries. The importance of environmental taxes, among other things, demonstrates their increasing contribution to individual national budgets. In this paper, I point out environmental taxes and the process of their harmonization and approximation into the legal framework and tax system of the Slovak Republic.

Key words: approximation, harmonization, environmental taxes, tax system.

JEL classification: M48

IntroductionThe notion of ecological tax is relatively new and the uniform definition has not yet been clearly defined. Environmental taxes are often referred to as "green taxes" or "environmental taxes". The

OECD uses the term "environmentally related taxes" and defines them as "mandatory, non-equivalent payments to the public budget that are levied on tax bases considered to be particularly relevant in relation to the environment" (OECD, 2004). The OECD definition is also based on Eurostat. The European Union considers an environmental tax as: "The tax on which the tax is the physical unit (or its representative) of something that has a demonstrable specific negative impact on the environment." (Eurostat, 2013) An unequivocal definition of environmental tax demonstrates Kubátová (2006) on two different approaches: Ecological tax is understood as a payment to public budgets, which is expected to have a positive impact on the environment. This view highlights the reason for introducing environmental taxes. The second approach focuses on the tax base (subject of taxation), which is environmentally harmful production or consumption. According to Svátková (2011), environmental taxes are among the remedial taxes because they represent the costs of society needed to eliminate negative externalities in the form of environmental pollution by harmful substances not only for human health but also for the air of the planet. Vančurová (2012) uses the concept of energy taxes because it is taxes that burden energy products and electricity. Their purpose is to reduce energy consumption and hence CO₂ emissions. On the other hand, Svátková (2011) points to the fact that this terminology suppresses the ecological aspect of these taxes. The primary objective of the tax is to fill the public budget. However, Vančurová (2012) states that the ecological tax does not have to fulfill a fiscal function. In this way, the tax is actually eliminated itself. Reallocation of pensions from the more affluent to the poorer fulfills the redistributive function. That is why the richer ones are paying higher taxes. This is due to the uneven distribution of income in the society based on market mechanisms. The allocation function is applied if the market mechanisms fail. Negative externalities cannot be solved by the market itself. By imposing environmental taxes, the state is trying to change the behaviour of economic entities in the whole socially desirable direction. The aim is to change the preference of consumers by increasing the prices of environmentally unsuitable products for economic operators to consume their more acceptable substitutes. If we follow the OECD (2006) practical view, before each analysis, it is necessary to be

aware that environmental taxes are rarely introduced separately, in complete isolation, as is the case with the Slovak Republic. The final choice of method depends on the desired outputs if we want to analyze impacts on households, businesses, the environment, macroeconomic variables, individual markets, the national economy sector, or inter-industry linkages.

The regulation of environmental taxes in the European area is mentioned for the first time in Directive 2003/96 / EC, which repeals Directive 92/81 / EEC. The full title of "Council Directive 2003/96 / EC amending the structure of the Community framework for the taxation of energy products and electricity" was adopted by the European Parliament and the European Council on 27 October 2003 and came into force on 1 January 2004. Taxation of mineral oils was extended to tax on coal, gas and electricity. EU Member States were obliged to introduce minimum rates of tax on energy products and electricity. The purpose of this directive was not only to ensure the functioning of the internal market. One of the main objectives of the Directive was to reduce the volume of emissions produced in accordance with the Kyoto Protocol. In this context, the Directive allowed tax incentives for entities that are taking measures to limit emissions. By setting a minimum rate of taxation, the Directive aimed at improving the functioning of the internal market by reducing distortions of competition and eliminating the possibility of tax evasion. In view of the new Member States acceding to the EU in 2004, Directive 2004/74 / EC was adopted which supplements Directive 2003/96 / EC. It allowed some Member States to apply a temporary tax exemption or a reduced rate of tax. This was due to concerns about the introduction of mandatory minimum rates during the ongoing transformation of the accession economies, along with the threat of unbearable burden on small and medium-sized companies. Relevant documents include the Treaty on European Union (2008), in which environmental protection is involved in the policies of the Member States. This is especially due to prevention of individual problems at the point of origin. In the context of environmental policy, the EU applies many principles, the principle of harm prevention and prevention, the principle of remedying environmental damage, especially at source, and last but not least, the polluter pays principle. There is chosen

the country of destination principle in legislation. To avoid distortion of the market, the good is taxed in the country of consumption. Taxes governed by the Directive are broken down into taxes that are specific, since the bases of individual taxes are expressed in physical units. Subsequently, the tax rate is expressed in monetary units (Vančurová 2012). For each type of product, the bases are determined specifically: 1 000 liters - lead and unleaded petrol, gas oil, kerosene, LPG, heavy fuel oil, GJ of incinerated heat, natural gas, coal and coke, and electricity in MWh. Member States may also use units other than those defined by the Directive. They must, however, comply with the requirement that the taxation rate in calculating this unit is not less than the minimum rate. The base for energy and electricity taxes, which is determined by volume, is measured at 15 ° C. Countries which national currency is not the euro are required to set monetary rates to convert the level of taxation once a year. To convert the national currency to the euro, the rates applied on the first working day in October are published in the Official Journal of the European Union. This rate is valid from 1 January of the following year. Of course, Member States do not have to change their annual tax rates annually if they do not increase the tax by more than 5% or EUR 5 after the conversion of the taxed amount into the euro. In this case, a lower amount is taken into account.

In addition to harmonizing the tax base, the Directive set minimum levels of taxation applied by the Member States to taxable items. The individual rates were set for each product separately, while the purpose of product use was differentiated. The level of taxation means "the amount of all indirect taxes (excluding VAT) calculated directly or indirectly from the amount of energy products and electricity at the time of their release for domestic consumption." (Council Directive 2003/96 / EC). Member States are allowed to apply differentiated rates. These, of course, must not be lower than the minimum levels of taxation required by the Directive. The possibility of a differentiated level of taxation was related to the following cases: differentiated rates are directly linked to product quality, differentiated rates depend on the amount of electricity consumed and the energy products consumed for heating, for use in local public passenger transport, taxis, armed forces, public administration, emergency

vehicles or for the needs of disabled persons, and in the waste collection. The differentiated rate was also used to distinguish the use of energy products and electricity for commercial and non-commercial purposes.

Three groups of subjects are participating in the environmental policy system, which are described by Jilková (2013). Polluters are burdening natural resources with emissions of harmful substances. In this way, the opportunity to use environmental goods is reduced for the harmed. The state acts as a regulator among entities that cannot agree on prices and the market. Various models apply to addressing environmental issues:

Table 1. **Models of environmental issues**

Solution proposal	Solution result
Regulation by the state	suppresses activities that lead to negative externalities and directs the behaviour of economic subjects in the desired direction.
Economic internalization	uses a pricing mechanism where the negative externalities producer is taxed and the beneficiary of the positive externalities receives the subsidy.
Property rights solution	Coase (1960) already solved and proposed it. In his model, the author claims that if parties are negotiating together, externalities do not have to be created at all. The condition is clearly defined ownership rights and zero transaction costs. Through interviews, operators find the optimal amount of pollution, where the marginal damage from pollution is equal to the marginal cost of removing the pollution.

Source: Jilková, 2013.

According to Romančíková (2011), it is necessary to consider a rationally responsible producer burdened by an environmental tax. Knowing its limit costs for reducing environmental pollution and the amount of environmental tax applied will be stimulated to reduce discharged emissions to the extent that its cost of reducing environmental pollution by one unit of emission will be lower than the amount of environmental tax applied to the unit of emission. In this way, the manufacturer can minimize the costs of producing emissions. Graphically, this consideration can be expressed as in Figure 1.

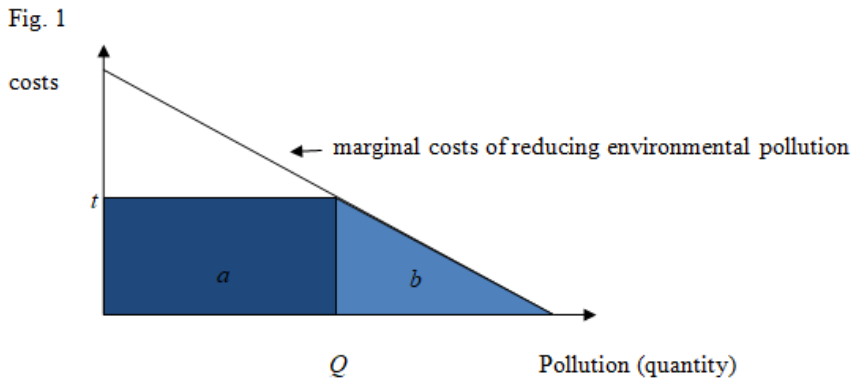


Figure 1. **The environmental tax cost effect**

Source: Romančíková, E. (2011), *Economy and environment*

The x-axis is the amount of emissions emitted, the y-axis cost to be spent on pollution reduction. Boundary pollution reduction curve: Rises right to the left, which is due to the fact that the more pollution is reduced, the more the cost of further reduction is increased. The emission tax is set at the amount of t , although it does not accurately, but at least roughly, reflect environmental damage. Point Q is the point that determines the economically optimal amount of pollution produced by the polluter. According to Vančurová (2012), the purpose of excise taxes is to deliberately burden the product group on the part of the state in order to limit their consumption. Due to low elasticity, they represent a relatively stable contribution to the state budget. Another relevant reason for their introduction, apart from the efforts to improve the health of the population, is the environmental protection arguments. The dynamic aspect of the impact of Romančíková's environmental tax (2011) on the efficiency of the use of financial resources to protect the environment will be demonstrated if the polluter applies technical progress, resulting in a reduction in the amount of emissions emitted, and thus a reduction in the basis for calculating the environmental tax can be represented as follows:

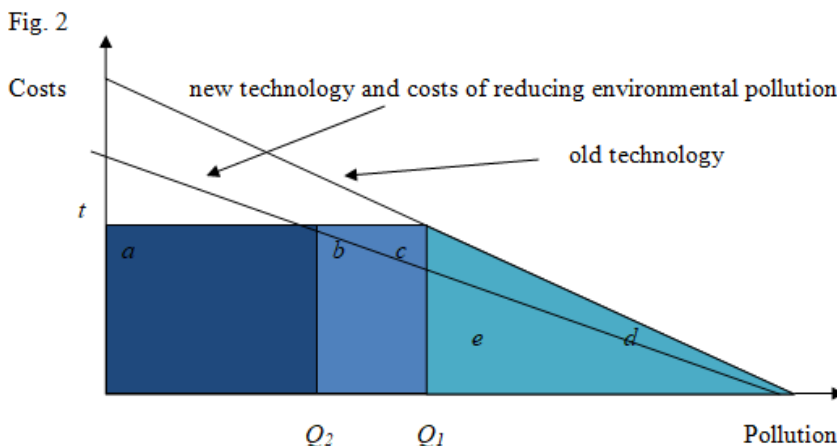


Figure 2. **Innovative environmental tax effect**

Source: Romančíková, E. (2011), *Economy and environment*

This means that, when applying the environmental tax, a company can make use of technical progress to minimize costs in the area of $c + d$. If environmental quality management is ensured using straightforward instruments - standards, emission limits that would be set out in Q_1 , the company would have a saving only in area d . This means that the use of environmental tax, as opposed to direct regulation (standards), creates greater incentive for manufacturers to apply cutting-edge technologies.

The Slovak excise tax regime is bound by several laws. This law introduces a new type of environmental taxes from 1 July 2008 into the Slovak tax system, namely the excise tax group. This is an excise tax on electricity, coal and natural gas. The implementation of environmental taxes was carried out in accordance with EU legislation, which was incorporated into the Slovak tax system by Directive 2003/96 / EC.

Slovakia, as an accession country to the EU in May 2004, was to apply exemptions from the taxation of energy products and electricity under Directive 2004/74 / EC. Individual Member States have been allowed to benefit from a temporary tax exemption or a reduced rate of taxation. Until 1 January 2010, Slovakia was allowed to apply a transitional period in order to adapt the rate of taxation of electricity and gas consumed as a fuel to the minimum tax rates under Directive 2003/96 / EC. Until 1 January 2009, a transitional period could be used to adapt the rates of solid

fuels to set minimum rates of taxation. In both cases, by 1 January 2007, national rates could not be lower than 50% of the current rates used by other EU members. The aim of Act No. 609/2007 Coll. is the excise tax on electricity, natural gas and solid fuels (coal and coke). The basic difference in the taxation of electricity, coal and natural gas and other energy products is a tax liability. The tax on energy products arises on the date of manufacture or on the date of release for free circulation, whereas the tax on electricity, coal and natural gas arises on the day of delivery to the final consumer or the day of his own consumption by a legal or natural person who is not the ultimate consumer. As electricity and gas supplies are replenishments, it is proposed that the date of delivery is at the latest the last day of the period covered by the payment for the delivered quantity, both in the case of pre-payment (small purchases) and payments for the actual delivered electricity and natural gas (wholesalers).

In 2010, excise duty rates on electricity and natural gas used as fuel doubled. The rate of taxation of coal remained unchanged. The tax liability is determined as the product of the tax base and the applicable tax rate.

Consumer taxes on electricity, coal and natural gas are among the youngest environmental taxes in the Slovak tax system. In the first year of the introduction of environmental taxes, yields were the lowest amount at all, amounting to nearly nine million euros. In the following year, they more than doubled to \$ 19.8 million euros. A significant difference between these years may be the result of the inexperience in tax collection in 2008 as well as the possible impact of the global crisis. The year 2010 again represented a remarkable increase in the state budget's contribution, when electricity and gas tariffs doubled. Revenue from newly introduced environmental taxes exceeded 36 million euros. Since that year, there has been a rather steady growing upturn to date. Earnings from environmental taxes per capita in the EU 27 are incomparably higher than in Slovakia. While the figure for Slovaks is in units of euro, in the case of the EU 27, the per capita income amounts to several hundred euros. Of course, in defending Slovakia, it is appropriate to take into account their new role in the tax system. The main reason for the significant difference in headcount revenues is the fact that, in the case of Slovakia, an interpretation focusing on environmental taxes is incorporated into the excise tax group

under Slovak legislation. A large number of taxes of an ecological nature are part of other tax groups rather than in the group of consumer - environmental taxes. As an example, it is appropriate to include a tax on waste, which is levied as a municipal fee, or the tax on motor vehicles also has environmental elements. In this sense, excise tax on electricity, coal and natural gas is considered in the contribution to environmental taxes. While in the case of the EU 27 data, it is the total sum of tax revenue with any relation to the environment. This approach follows from the definition of ecological taxes of the European Commission, which considers everything that negatively affects the environment as a subject of environmental taxation. The share of environmental taxes in GDP in the Slovak Republic had been decreasing since 2007 and reached 1.81% in 2016. The share of environmental taxes in total tax revenues in the Slovak Republic had been decreasing since 2007 and reached 5.61% in 2016. On average, the share of taxes with environmental aspect on GDP and the share of taxes on environmental aspects in total tax revenues increased. The largest share of taxes on the environmental aspect of GDP is contributed to the energy tax, which was 1.6% in 2016. The Slovak Republic is among the EU countries with the smallest share of taxes with an environmental aspect on GDP.

Conclusion

Based on accepted global as well as European commitments to environmental protection and reduction of environmental burden, the process of harmonizing and approximating environmental solutions in Slovakia in the area of taxation is inadequate. The Slovak Republic has prepared several documents in which it has committed itself to the implementation of agreements, in the Strategy by 2030, Slovakia will consider the possibility of extending environmental taxes in individual areas and, on the basis of this, the selected measures will be applied in order to increase their overall volume. Despite the fact that Slovakia is a developed economy, we use the tools to sanction interventions in natural resources to a small extent. The yield from environmental taxes belongs among the lowest in the OECD countries in Slovakia, and the implicit taxation on energy is the second lowest in the EU. In addition, in today's conditions, the fines

awarded for environmental pollution are low incentives for the polluter to switch to less harmful technologies. It may be that the total fine represents only a small fraction of the profit that can be obtained at the expense of exceeding the set limits. As part of the commitments made by the Paris Climate Agreement, an environmental tax reform that is fiscally neutral should be considered in the Slovak Republic and its legislative and harmonization process. One option is to abolish excise tax exemptions or to introduce new taxes to reduce pollution.

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