

TRENDS AND PERSPECTIVES OF THE ENVIRONMENTAL TAXES

Nadezhda Blagoeva

Agricultural University – Plovdiv

*E-mail: nblagoeva@au-plovdiv.bg

Abstract

The environmental taxes have been a main focus of the European environmental policy in the last few years. Well-structured and balanced, they could not only generate budget revenues. In the same time with their fiscal function, they can change the production, the consumption and the behaviour of the economic agents, directing them to the more rational use of the environment.

The relatively small share of the environmental taxes indicates that the potential for using this economic instrument is not well deployed. The data shows that the energy taxes, followed by the transport taxes, are among the most commonly used ones in the European countries. The pollution taxes and resources are less common. All these arguments imply the need for a greater focus on the environmental taxes. They also have the other benefits as for example low administrative burden and compliance costs. The increasing of their share could contribute to shifting the tax burden from income taxation, which to the biggest extent distorts the behaviour of the economic agents.

Keywords: environmental taxes, energy taxes, transport taxes, pollution and resource taxes.

INTRODUCTION

Bulgaria's membership in EU makes it an integral part of the common European policy, including that one of the environment. The Treaty on the Functioning of the EU gives it the power to take action on air and water pollution, waste management and climate change. The European environmental policy is based on two basic principles. The first one is linked to the preventative measures, as well as the quickest possible elimination of already occurring pollution directly at the source.

The second one is the polluter pays principle. Namely, this one creates the link between the ecology and the payments in the form of taxes and fees. Not only the fiscal function of the tax but its environmental one is thus applicable. The purpose of this article is to identify and evaluate some current trends and perspectives for environmental taxes in the Republic of Bulgaria and the EU-28.

MATERIALS AND METHODS

The development of this study is based on data from Eurostat and the National Statistical Institute. The applied system includes general logical methods such as methods of induction and deduction, analysis and synthesis, the abstract-logical approach, the method of comparative analysis, the historical method.

RESULTS AND DISCUSSION

The environmental protection requires joint action and active government intervention, including at local level. Without such a regulation, there are no other market incentives for the economic agents to encourage them to maintain the balance in the nature. Therefore, environmental taxes are a significant element of both fiscal and environmental policies of each country. They carry great potential for the both goals to be achieved at the same time.

Unlike other taxes based on the principles of ability-to-pay and benefit principle, there is another in the environmental taxes so-called 'polluter pays'. It is implemented on the basis of Directive 2004/35/EC on environmental liability with regard to the prevention and remedying of environmental damage.

Its main purpose is to create an environmental liability framework based on the 'polluter pays' principle in order to prevent or remedy environmental damage. It is stated that one who is "causing environmental damage or creating an imminent threat of such damage should, in principle, must bear the cost of the necessary preventive or remedial measures".

The need for the government's use of economic instruments when pursuing their environmental policies was argued earlier in the Rio Declaration on Environment and Development. Its 16th principle states that "National authorities

should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment" (The Rio Declaration on Environment and Development, 1992).

The environmental taxes are distinguished by their specificity that sets them apart from the rest taxes. They are a classic representative of the so-called Pigou tax (Pigou A., 1920). This is a tax that levies any economic activity with proven negative externalities. Its main purpose is to correct the behaviour of the economic agents. That is why this type of tax is associated with the so-called "Double dividend".

On the one hand, it changes the behaviour of the taxpayers and, on the other, it helps to increase the revenue side of the budget. There are researches (Fullerton, D., Metcalf, G., 1998) that defines the "double dividend" hypothesis, considering that the environmental taxes can both help to protect the environment and to improve its economic efficiency, creating preconditions for shifting and reducing the tax burden from the income taxes, which are also considered to be one of the most distorting the behaviours of the economic agents.

The United Nations System of Environmental and Economic Accounting (SEEA) provide own definition of environmental taxes. It was later adopted by other international organizations such as Eurostat, OECD. According to it, the environmental tax is "a tax whose tax base is a physical unit (or a proxy of it) of something that has proven, specific, negative impact on the environmental".

Although this definition is widely accepted, each country is free to provide and adopt in its tax policy another definition. However, not many countries have really defined the nature of the environmental taxes. One exception is the United Kingdom. The government there defines environmental taxes as those that meet all of the following three principles:

- The tax is explicitly linked to the government's environmental objectives;
- The primary objective of the tax is to encourage environmentally positive behaviour change;
- The tax is structured in relation to environmental objectives, for example, the more polluting the behaviour, the greater the tax levied.

Based on these principles the UK

government identified the following taxes as environmental: Climate Change Levy, Aggregates Levy, Landfill Tax, EU Emissions Trading System, Carbon Reduction Commitment Energy Efficiency Scheme, Carbon Price Support. Having in mind these three principles, it is clear that the main focus of the environmental taxes in the UK is to change taxpayers' behaviour according to the objectives set by the Government's environmental policy.

At the same time, the definition adopted by Eurostat and the other financial institutions focuses on the tax base, not so much on the motivation for environmental protection. The main purpose of this definition is to create a basis for comparability between countries, while a more precise definition could be achieved in the national policies of the countries.

Further Eurostat classified the ecological taxes between four different categories:

- 1) Energy taxes on products for transport and stationary purposes. The first one includes petrol and diesel. The second one includes liquid fuels, coals, natural gas, electricity, carbon taxes.
- 2) Transport taxes on the ownership and use of vehicles, road use
- 3) Pollution taxes on measured or estimated emissions to air and water, waste management
- 4) Resource taxes on water abstraction, extraction of certain raw materials

These four categories do not have a same fiscal significance. The dynamics of the environmental taxes over the last 20 years, as well as their distribution by type, can be traced to the following figure № 1.

There is a trend of increasing environmental tax revenues, interrupted only by the years of financial crisis, when there is a general decrease in all tax revenues. Unlike the previous years, in the last three of the analyzed period, the growth rate of environmental tax revenues has become faster than that of GDP.

These changes could also be traced to the four categories of environmental taxes in the following figure №2.

The countries are arranged in descending order according to the value of energy taxes. Namely, the energy taxes form the overwhelming share of the revenues. The EU-28 average in 2017 is 76.88%, although, in countries such as the Czech Republic, Romania, Luxembourg and Lithuania, this share reaches over 90%. On the opposite end are Malta, Denmark and the Netherlands, where the energy taxes account for just over 50% of total revenues.

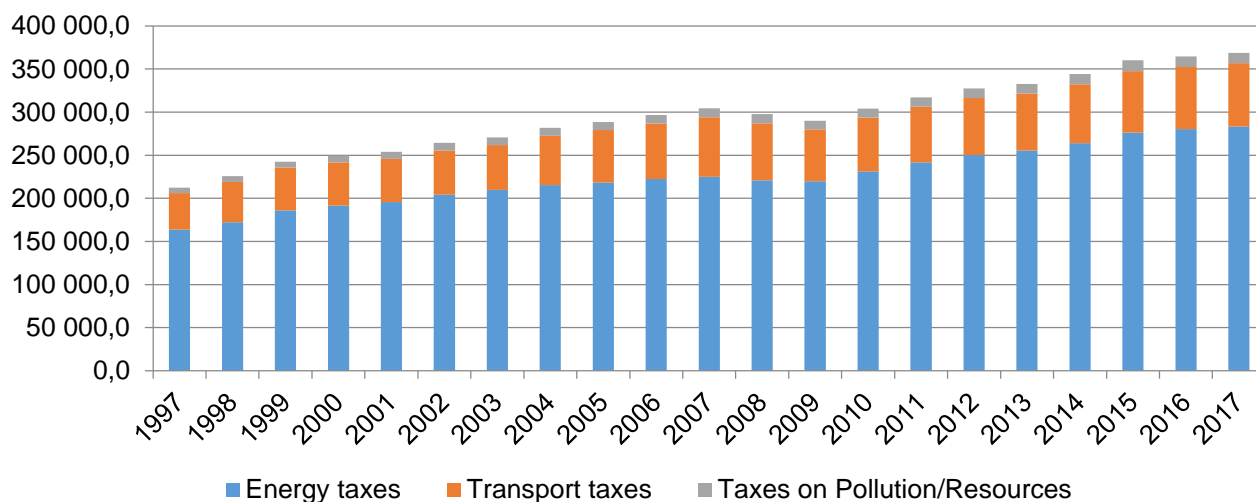


Fig. 1. Environmental tax revenue (million euro) by type of tax in EU, 1997–2017

Source: Eurostat

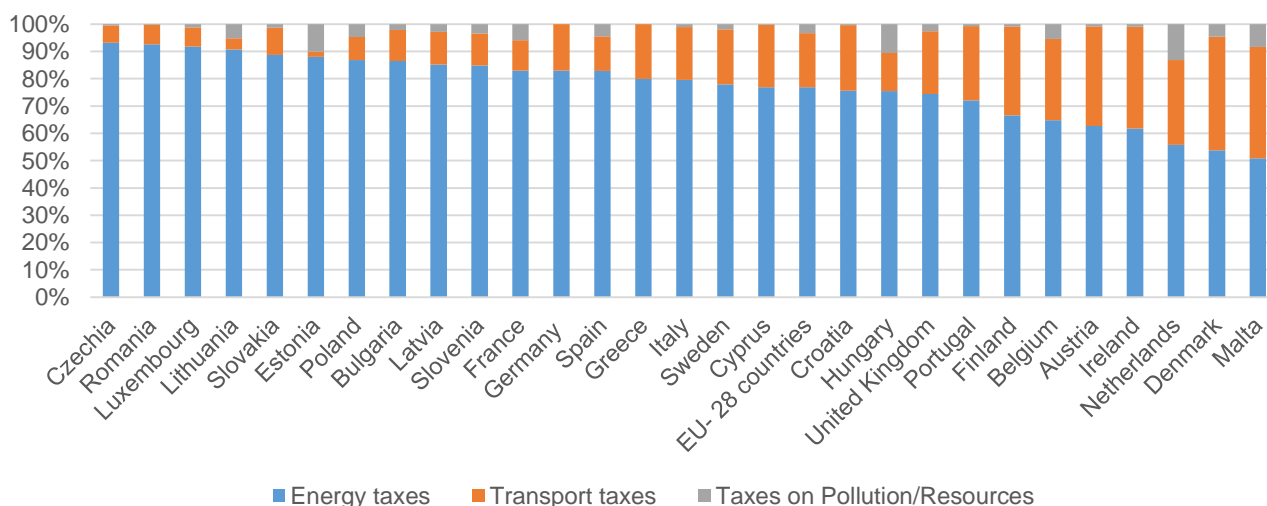


Fig. 2. Environmental taxes by tax category, 2017

Source: Eurostat

The transport taxes are second in terms of fiscal importance. Their values are highest in Denmark, Malta, Ireland and Austria – 41.6%, 40.81%, 37.27% and 36.35% respectively. The transport taxes are the smallest in Estonia – under 2%.

The pollution taxes and resources are third in favour of the fiscal with a relatively low share. The average value for Europe is only 3.35%. In many countries, this type of tax was introduced later after the transport and the energy taxes. In Cyprus, Romania and Croatia, their share is less

than 0.5%. Netherlands, Hungary and Estonia are on the opposite end, where this type of taxes generates respectively 13.19%, 10.61% and 10.08% of the total value of the environmental taxes.

The huge differences in the shares of the different categories of environmental taxes can be explained by tracing their components, the level of state that determines their tax base and rates. Energy taxes are characterized by the highest share, as they have a stable basis, they are indirect taxes. The later ones have many advantages over

the direct ones because they are easy to collect and have good tax tolerance. They are taxing goods with low elasticity of demand, and according to Ramsey's rule, this kind of products are subject to higher tax rates. Their minimum values are laid down in Directive 2003/96/EEC while preserving the possibility of certain specific national taxes such as for example the Polish fuel tax. They are split into energy taxes for transport and stationery needs, a carbon tax, with all EU 28 countries applying them. The legislation distinguishes different tax rates between different use of household or industrial needs, between product type diesel and petrol.

There is a practice for tax relief in the form of exemptions or reductions. For example, electricity used by households is exempt from paying tax in Bulgaria, Croatia, Hungary, Lithuania, Latvia, Poland, Romania, England; natural gas - in Bulgaria, Croatia, Hungary, Romania and England; coal - in Bulgaria, Lithuania, Hungary, Poland, Romania, Slovakia and England. In other countries, relief is provided for the agricultural sector, public transport, etc. An important debate here arises about the differentiated tax rates for petrol and diesel. In all EU countries except England, they are different. However, in the last 10 years, there has been a steady trend of narrowing this gap, with a total of 20 countries reducing their differentiation in the tax rates, Germany without change and the rest countries increasing this gap even further. Nowadays, there are countries where the differences are not so significant and amount to less than 10%.

These are Cyprus, Romania, Estonia, Hungary and Bulgaria, where the petrol is more expensive than the diesel by 6%, 7%, 8%, 9% and 10% respectively. Greece is at the opposite end, where the difference amounts to 101%, the Netherlands – 59% and Portugal – 53%.

In the last few years, the carbon tax has become a key moment in the attempts to reduce carbon emissions and promote cleaner and greener technologies. Two approaches are possible here: 1) an emissions trading system that is implemented in all 28 countries; 2) carbon taxation system. The latter one was first applied in the Nordic countries at the beginning of 1990s in addition to existing energy taxes. Up to date, it is applied in 12 European countries – Croatia, Denmark, Estonia, Finland, France, Ireland, Latvia, Poland, Portugal, Slovenia, Sweden and the United Kingdom. The difference between the two applicable taxation schemes is that energy taxes aim to reduce energy consumption, while the carbon tax aims to shift consumption towards less carbon-intensive energy resources. This is why its implementation is

considered to be such a key moment to cut greenhouse gas reduction emissions. Even the IMF in its report stresses that this can best be achieved through the introduction of a carbon tax. IMF Director Christine Lagarde and IMF Fiscal Policy Director Victor Gaspar said in their release that the carbon tax is "the single most effective tool for reducing emissions". According to them, this will reduce the consumption of harmful energy sources and encourage the use of cleaner fuels. In addition, revenue will be provided, which will then be allocated to support sustainable growth. The carbon tax and its widespread application are perhaps one of the promising opportunities for implementing economic instruments to achieve the environmental goals that are to be developed over the next 10 years.

The most commonly used transport tax is the annual property tax, which exists in all European countries. Six of them, namely the Czech Republic, Estonia, France, Lithuania, Poland and Slovakia, apply for exemptions by taxing only commercial vehicles and not passenger cars. In most countries, however, property taxes have been replaced by a one-off tax due on the sale or the registration of a car, with the exception of the Czech Republic and Estonia. It applies in a total of 20 out of EU-28. The characteristic of the vehicle tax is that it is property tax, and this type of tax does not generate significant tax revenue. In most countries, it is also local. All this determines its less significant share in the structure of the environmental taxes.

A part of the transport taxes is road use, which is divided for passenger cars and heavy goods vehicle. The latter ones are taxed almost without exception in 25 countries. Only Cyprus, Malta and Estonia do not have a road tax for vehicles, regardless of their type. The reliefs for passenger cars are much more, so only 15 countries pay a road tax. At present, the congestion charges are not widespread and are applicable in 4 countries - Italy, Malta, Sweden and the United Kingdom.

The total contribution of transport taxes to the overall environmental taxes amounts to approximately 20%. Impressive practice here is for Denmark and Malta, where these values reach just over 40%. For comparison, their share in Bulgaria is 11.36%.

The fiscal significance of pollution and resource taxes is even smaller. The EU-28 average value is only 3.35%. The practice in this regard is very diverse between countries - taxation of emissions into the air, wastewater, pesticides used in agriculture, waste. The only tool applicable in all 28 countries, due to EU requirements, is taxes and

fees on individual product categories such as batteries, accumulators, plastic bags, tires, electrical products, end-of-life vehicles, etc. As a result of EU policy, currently, 25 countries are taxing landfills. All this focuses on the subsequent harmonization and increase in the use of pollution taxes and resources

The dynamics of the revenues from environmental taxes in the last 20 years can be

traced to figure № 3, where the environmental taxes can be traced across the abscissa axis as a percentage of GDP and the ordinate axis - the change in this indicator for the period 1997–2017. Although there are quite a few countries concentrated around the abscissa axis that show minor changes over this 20 years, there are many other countries that deviate significantly.

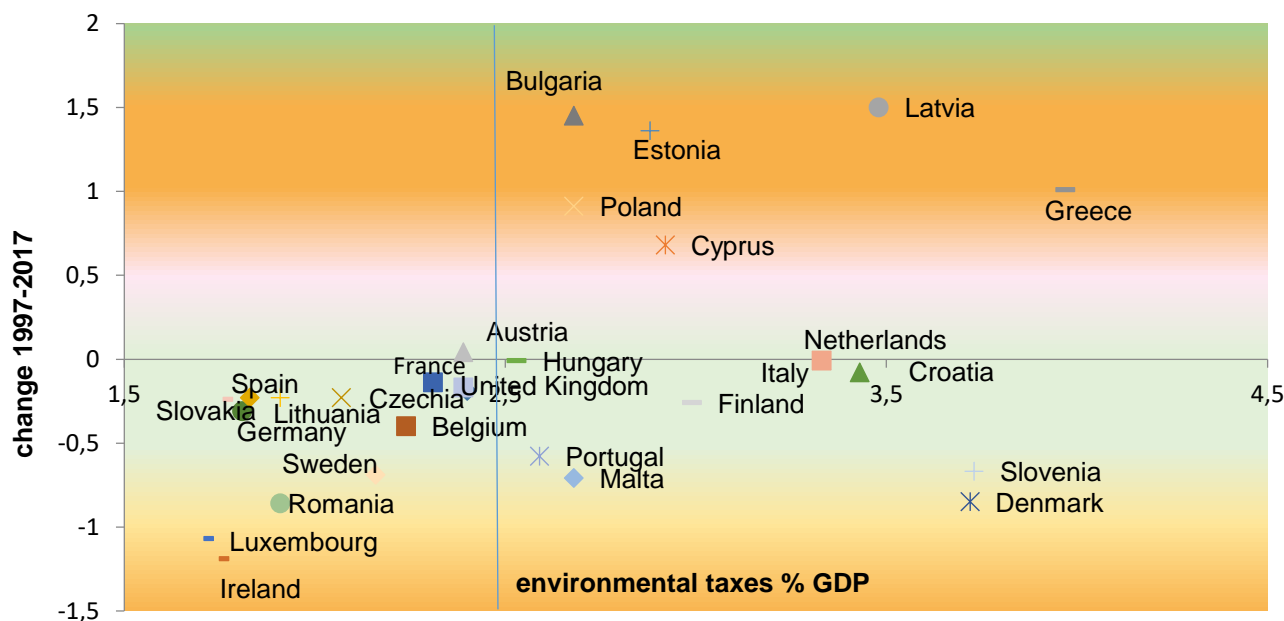


Fig. 3. Change in the environmental tax revenues 2017 vs. 1997

Source: Eurostat

The most interesting dynamics is this one of the countries to the right of the EU average in 1 and 4 quadrants. They are characterized by a higher tax collection than the average for Europe, some of them increasing their taxes even more and another – reducing them. The first category includes Latvia, where the environmental taxes have the highest increase, followed immediately by Bulgaria, Estonia, Greece, Poland and Cyprus. Greece is the country with the highest values of the analyzed indicator. The second category covers countries that are also above the EU average but reduce their environmental taxes.

These are Slovenia, Denmark, Portugal and Malta. The dynamics of the third quadrant countries, that are characterized by lower values compared to Europe average and further reduce their revenues from environmental taxes, is also indicative. The most serious is the fall in Ireland, Luxembourg and Romania.

Also, it is interesting to analyze the amount of the environmental taxes by country as a share of

total revenue from taxes and social contribution and relative to GDP. They can be traced to the following figure № 4, where the countries are ranked in descending order of the amount of the environmental taxes as a share of total revenue. Most environmental taxes are collected in Latvia, Slovenia, Greece, Croatia and the fifth position belong to Bulgaria. On the opposite end are countries such as Luxembourg, Germany and Belgium, where the indicator is just over 4%. According to the EU's target, this indicator should gradually reach 10%, so Bulgaria with its 9.07% is close to the stated value.

The reason for the 5th place at the beginning of the ranking is mainly due to the impact of the energy taxes, which have the overwhelming percentage of the revenues. The exceptional advantage of the indirect taxes, including excise duties, in our country, brings us in the forefront. We still need to clean up our legislation and focus on achieving environmental goals.

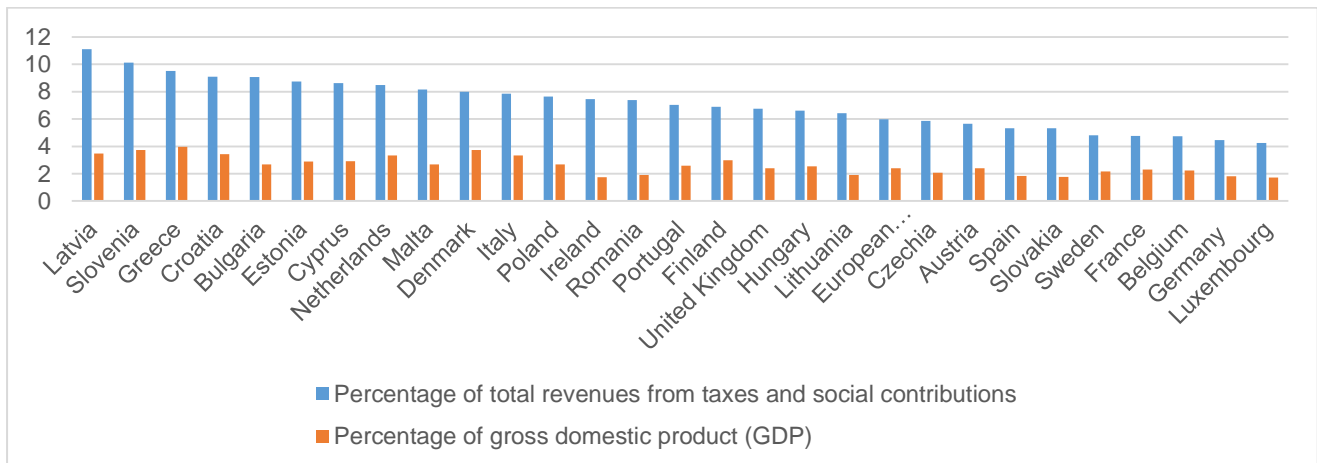


Fig. 4. Total environmental tax revenues EU-28, 2017

Source: Eurostat

After the latest changes in the vehicle tax since the beginning of 2019, the first steps in this direction have been made. For the first time, our law begins to take into account the environmental component in determining the tax. The next very important and much more difficult step is to adjust the tax base of the municipal waste tax. The current one is still a tax assessment.

At present, municipalities have not developed a methodology for counting the waste. An issue of an extreme significance having in mind the lack of a culture and practice in the management of the waste, especially in Bulgarian households. At the same time, this is also a problem with a significant environmental impact on the overall environmental policy. These are only the first steps in the policy towards a wider application of environmental taxes as an economic tool for achieving environmental goals. A trend that is becoming more and more widespread not only because of the need to take urgent environmental protection measures but also because of the benefits that characterize this type of tax. There are studies (EEA Report, 2016) that show that environmental taxes have low administrative costs, low compliance costs, and reduced tax evasion.

CONCLUSIONS

The low value of the environmental taxes shows insufficiently used opportunities for government influence on the production, the consumption and the behaviour of the economic agents in order to achieve environmental goals. At the same time, they have significant potential because of the combination of different functions. As a result of the analysis of trends and dynamics

of the environmental taxes, several important conclusions can be summarized:

1. The national tax legislations of the countries should give a more accurate definition of the concept of an environmental tax;
2. Most revenues are generated by energy taxes, which now implies efforts to target the potential of the other categories;
3. A promising opportunity for the future development of the environmental taxes is the carbon tax;
4. Bulgaria is among the top places in the ranking of the environmental taxes, but the reason lies in the generally high share of the indirect taxes, and in particular excise duties, which are the second most important fiscal item in the state budget. In other categories, taxes are predominantly local or property, which limits their fiscal importance.

REFERENCES

- Directive 2004/35/CE of the European Parliament and of the council on environmental liability with regard to the prevention and remedying of environmental damage.
- The Rio declaration on environment and development (1992).
- Pigou, A.*, 1920. *The Economics of Welfare*. London: Macmillan.
- Fullerton, D., Metcalf, G.*, 1998. Environmental Taxes and Double-Dividend Hypothesis: Did You Really Expect Something for Nothing? *Chicago-Kent Law Review* 73, pp. 221-256.
- EEA Report, 2016. *Environmental taxation and EU environmental policies*, Luxembourg.