GREENING POLISH AND LITHUANIAN TAX SYSTEMS

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**Abstract**

**Purpose** – The aim of this paper is to provide a brief overview of environmental tax reform issues and greening national tax systems in Poland and in Lithuania.

**Design/methodology/approach** – The author applies definition of environmental tax reform, environmental taxes and their classification used by EEA, Eurostat and OECD.

**Findings** – The environmental tax reform has not yet been implemented in either country. However, we can observe single steps towards greening of national tax systems.

**Research limitations/implications** – The scope of this paper does not allow for thorough analysis of ETR issue and its implementation, however, may serve as basis for further research.

**Practical implications** – This paper shows that it is desirable to investigate thoroughly on relation between lowering PIT/CIT rates (social contributions) and raising of environmental taxes.

**Originality/Value** – The issue of greening Polish and Lithuanian tax systems has been relatively seldom discussed in both countries.

**Keywords**; greening tax system, environmental taxes, environmental tax reform

**Research type**; research paper

**Introduction**

A political system transformation that took place in the beginning of 90’s of the XX century has led to a major change in Polish and Lithuanian economies. It has also triggered social changes and among them a visible growing social interest in environmental protection. Nevertheless, a need for an economic growth related to development of industry and new investments may often outweigh social interest in clean water and unpolluted air. These concerns has been expressed in Principle 4 of Rio Declaration\(^1\) which reads as follows: “in order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it”. Sustainable development is being understood

as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs" (Our Common Future, 1987). Implementation of sustainable development policy requires effective tools capable of modeling human behavior to a satisfactory extent. A properly designed, environmentally-oriented tax system may become one of such tools.

The objective of this paper is to provide a brief analysis of an issue of environmental taxes in Polish and Lithuanian national tax systems and to answer a question of whether we may observe implementation of environmental tax reform in either of these countries. At the same time, the paper is aimed at providing a brief insight into the process of greening national tax systems in Poland and in Lithuania in the XXI century. The foregoing will require, however, introducing necessary background which are concept of market-based instruments for protection of the environment, issue of environmental taxes and environmental tax reform.

**Market-based Instruments for Protection of the Environment**

Protection of the environment may be achieved through variety of different measures, policies and instruments, such as cap-and-trade permits systems, taxes and charges on pollution and use of natural resources, subsidies, deposit-refund systems, technology/performance standards, society involvement or voluntary approaches (Towards Green..., 2011, p.37). All of these instruments may be divided into three main categories: regulatory measures (command and control policies), market-based instruments and voluntary approaches.

Whereas regulatory measures are still most widely used method for environmental policy, market-based instruments, and in particular taxes, have been playing a larger role in addressing environmental pollution issues during the past decade (Market-based instruments..., 2005, p.68). Specific needs of environmental protection often require a precautionary approach which is best secured by laying down minimum (protection) standards: emissions ceilings, air quality standards, vehicle emissions standards, fuel quality standards etc. However, after such minimum standards have already been laid down, human behavior may be influenced by use of market-based instruments such as taxation, subsidies or permits trading scheme and not only regulatory measures.

Regulatory measures in comparison to market-based instruments are disadvantaged in a way they do not raise any funds and do not provide any incentives for innovation. The very nature of taxation is raising funds for public expenditure. Funds earned from environmental taxation may be used for consolidation of public finance, but may also be spent on protection of the environment. The second advantage of market-based instruments are incentives for innovation. Undertakings, in order to gain a better position vis-à-vis their competitors will normally seek to introduce variety of abatement measures what may lead to introducing new technical solutions. (Towards Green..., 2011, p.39).

Implementation of market-based instruments such as taxation coerce business undertakings to take external costs (‘externalities’) of their activity, i.e. damage to the
environment, into account and include them in prices (Bartniczak, 2011, p.11-22). When such externalities are not included in prices, they can encourage activities effects of which are costly to society, e.g. related to health care (Hamilton, 2000, p.8). In other words, costs of damage to the environment not borne by business undertakings are borne by whole society which is contrary to well-established (i.e. in art. 191 of The Treaty on the Functioning of the European Union\(^1\)) polluter pays principle according to which costs of such damage (pollution) should be borne by polluter. The question is, however, which taxes may be perceived as instruments for environmental protection and, thus, called environmental taxes?

**Environmental Taxes and Environmental Tax Reform**

The crucial issue for considerations on environmental taxes and environmental tax reform is a definition of environmental taxes. Such definition has been proposed by the Organization for Economic Co-operation and Development (Environmental taxes..., 2001, p.9) and reads as follows:

‘a tax whose tax base is a physical unit (or a proxy of it) of something that has a proven, specific negative impact on the environment.’

Although the term environmental taxes may be interpreted as relating to environmentally, not fiscally, motivated taxes, motivation is not part of the definition. It has been decided that all taxes on energy and transport are included in the definition, whereas, VAT is excluded due to its specific characteristics (Environmental taxes..., 2001, p.9-11). OECD (2001) distinguishes between four main categories of environmental taxes:

- energy taxes (including CO\(_2\) taxes)
- transport taxes
- pollution taxes and
- resources taxes (excluding taxes on oil and gas).

Even though, as it was mentioned before, motivation is not a part of the definition of environmental taxes, taxes on oil and gas were excluded for purely motivational reasons as they are designed to capture resource rent (Environmental taxes..., 2001, p.12-13). The diagram below shows total environmental tax revenue by type of tax (taxes on pollution and resources, on transport and on energy) in the European Union (27) countries 2000-2011. What is interesting, it shows that revenue raised from pollution and resources taxes is only marginal to revenue raised from transport taxes and energy taxes which is visibly predominant in this respect.

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Figure 1. Environmental tax revenue by type of tax in the EU (27) countries 2000-2011.


Environmental tax definition gives essence to so called environmental tax reform (ETR) which is defined as:

‘reform of the national tax system where there is a shift of the burden of taxes, for example from labour to environmentally damaging activities, such as unsustainable resource use or pollution’ (Environmental tax..., 2012).

The key word is a *shift* which means that the aim of ETR is not making aggregate amount of taxes imposed (net taxation) higher, but putting an emphasis on newly introduced or already existing environmental taxes. The aim of ETR is simply making certain, harmful to the environment, goods or activities more expensive while lowering taxes imposed on labour and/or capital (Śleszyński, 2001, p.19-20). Therefore, it has been argued that ETR may lead to so called *double dividend* that is diminishing harmful impact on the environment and providing benefits for society by boosting employment while at the same time keeping net taxation level unchanged (Podgajniak, 2005, p.49). However, it is often believed that ETR may also lead to negative effects such as regressive taxation and weakened competitiveness of national undertakings vis-à-vis undertakings established abroad. It is assumed that imposing taxes on energy and transport would impose a heavier burden on low-income households than on high-income households, since the former spend larger share of their income on these goods (Kosonen, 2012, p.1).

Can We Speak of Environmental Tax Reform in Poland and in Lithuania?

The concept of environmental tax reform assumes a shift, at least partial, of tax burden from labour/capital to environmentally damaging activities. However, in order to make such a shift real, revenue raised from taxing environmentally damaging activities should be substantial in order to cover for decrease in revenue from taxation of labour and/or capital. According to Eurostat data for 2011 (Environmental taxes, 2012)
environmental taxes in Poland constituted 7,89% of total revenues from taxes and social contributions, whereas, in Lithuania 6,58%. This situation has not changed significantly between 2001 and 2011. The diagram below shows percentage of revenues from environmental taxes in total revenues from taxes and social contributions for the period of 2001-2011 in Poland, Lithuania and the average for the EU (27 countries).

**Figure 2. Share (%) of revenue from environmental taxes to total revenue from taxes and social contributions in the EU, Poland and Lithuania 2001-2011.**

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In 2001 environmental taxes in Poland constituted 6.38% of total revenues from taxes and social contributions and in Lithuania 8.98%, whereas, the average for the EU was 6.63%. In 2011 the figure went up to 7.89% in Poland (1.51% increase) and went down to 6.87% in Lithuania (2.4% decrease) as well as the average for the EU (0.46% decrease). Moreover, in 2011 in both countries share of pollution and resources taxes in total revenues from taxes and social contributions was marginal – 0.65% and 0.2%, respectively (the average for the EU was 0.27%). This allows to conclude that purely environmental (taking into consideration their motivation) taxes could not serve as a sole basis for any shift of tax burden whatsoever. On the other hand, shares of revenues accrued from all environmental taxes in total revenues from taxes and social contributions might be called substantial. Though, the question is whether we may observe the shift between taxes on labour/capital and environmental taxes?

Most important taxes imposed on labour and capital are personal and corporate income taxes. Looking at PIT and CIT rates under the period of 2001-2011 we may observe a substantial cut in personal income tax (PIT) rates both in Poland and in Lithuania and a significant cut in corporate income tax (CIT) rate in Poland. The cut in CIT rate from 27% to 19% was effected in Poland in 2004 and alteration of three PIT rates (19%, 30%, 40%) with two rates (18% and 32%) took place in 2009 (since 2004 entrepreneurs could choose 19% flat PIT rate). At the same time, there was a cut in PIT rates in Lithuania. Originally, since 2002 there were two PIT rates: 15% and 33%. The higher rate was lowered to 27% in 2006, thereafter to 24% in 2008 and eventually disappeared since 2009. Basic CIT rate in Lithuania has not change under this period with exception for 2009 only when it was raised from 15% to 20% and afterwards went back to 15%. Given there were no changes in tax base under that period resulting in significant broadening of tax base, such decrease in PIT/CIT rates is an evidence of
lowering tax burden on labour and capital. These changes in personal and corporate income tax rates may raise a question of whether they were related to explicitly environmental tax reform or not. And if not explicitly, can we speak of implicit correlation between lowering of PIT/CIT rates and growing share of environmental taxes in tax burden? In other words, has there been a shift of tax burden between PIT/CIT and environmental taxes?

Diagram 3. Total environmental taxes as percentage of GDP in Lithuania, Poland and EU (27) 2001-2011.

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<tr>
<td>Lithuania</td>
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<td>Poland</td>
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The diagram above shows that although environmental taxes as percentage of GDP under the period of 2001-2011 has stayed almost at the same level in the EU (27), their “importance” in Poland grew by 0.5% and fell in Lithuania by 0.85%. Comparing this with changes in PIT/CIT rates a slight shift of tax burden in Poland might be claimed, while there has been no visible shift in Lithuania.

Under the period of 2001-2011 we can observe just a slight change in revenues from environmental taxes to total revenues from taxes and social contributions ratio, both in Poland and in Lithuania. At the same time we may observe just a slight change in total environmental taxes to GDP ratio, which in addition is negative in Lithuania. For this reason a significant shift of tax burden to environmental taxes that could stem from lowering PIT and CIT rates cannot be observed. Moreover, there has been no explicitly expressed political will to shift tax burden in such a way. A slight shift in case of Poland for its limited significance cannot be regarded as an evidence of implementation of environmental tax reform, even implicitly. Therefore, the conclusion seem to be that cuts in PIT/CIT rates were effected regardless of the concept of environmental tax reform and were not related to ‘environmental’ shift of tax burden. Nevertheless, this does not mean we cannot observe a process of greening national tax systems.

Greening Polish and Lithuanian Tax Systems

The expression greening of a tax system seem to be often used interchangeably with environmental tax reform as it is associated with the same essence being shift of tax burden to environmental taxes (i.e. OECD Round Table...1999, p.2-3; Bachus, 2012, p. 3). Greening of national tax system is usually measured using two indicators: the
revenues from environmentally related taxes as a percentage of GDP, and the revenues from environmentally related taxes as a percentage of the total tax revenues for a country (Bachus, 2012, p. 3). Taking into consideration the period of 2001-2011 in Poland and in Lithuania, “importance” of environmental taxes in relation to GDP and total tax revenues did not change significantly. Therefore, in terms of the abovementioned measures we cannot observe any substantial quantitative change. However, it should be also considered whether we may observe any qualitative change. For the purpose of this paper such qualitative change shall be considered as greening tax system even without shifting tax burden. Thus, the question is whether we may at least speak of greening Polish and Lithuanian tax systems in the XXI century.

Taking into account the definition of environmental taxes proposed by the OECD, the following Polish taxes are considered to be environmental (Taxation trends..., 2012):
- excise duties on petrol and other motor fuels/ electricity/ fossil fuels and natural petroleum gas, fuel fee,
- excise duty on cars and tax on means of transport,
- levies on environment exploitation, forest tax and payments for The National Fund for Protection of the Environment and Water Management.

National Polish authors add to the list of environmental taxes also tax on extraction on minerals, charge on alteration of agricultural land use etc. (Bartniczak, 2011, p. 162-163). According to data for 2010 (Taxation trends..., 2012), a vast majority that is over 60% of revenue raised from environmental taxes came from excise duties on petrol and other motor fuels, approx. 10% from fuel fee and only 8% from levies on environment exploitation and payments for The National Fund for Protection of the Environment and Water Management. In a way, excise duties are very efficient and convenient source of budget revenues (Gomułowicz, 2011, p. 574) and, thus, a very important figure in Polish budget. Nevertheless, even though such excise duties are imposed on units of substances or proxies (e.g. electricity) that have negative impact on the environment, the motivation for imposing them is far from the need to protect the environment.

At the same time, analysis of National Tax List provided for in Eurostat publication (Taxation trends..., 2012) shows that current list of environmental taxes in force in Lithuania consists of:
- excise duties on oils and other oil products,
- conveyance taxes,
- pollution taxes.

According to data provided by Eurostat (Taxation trends..., 2012), in 2010 revenues raised from excise duties on oils and other oil products amounted to over 95% of all revenues from the abovementioned environmental taxes. However, representatives of Lithuanian financial law (Miškinis, 2011, p.268-269; Sudavičius, 2011, p.416-434) provide a different list of environmental taxes:
- tax on the use of state’s natural resources,
- tax on oil and gas,
- pollution tax,
- forest tax.
The foregoing shows that national authors do not perceive excise duties on oil products and conveyance taxes as environmental taxes. On the contrary, they include tax on oil and gas and tax on the use of state’s natural resources which concerns the use (extraction) of minerals, water, building plots and wild animals. It may be pointed out that the second list consists of taxes classified as environmental due to their subject which are parts of the environment rather than presumably negative impact on the environment (except for pollution tax). Nevertheless, it is worth noting that exclusion of excise duties on oil and oil products from environmental taxes, makes the whole category of environmental taxes in Lithuania marginal in respect of their share in total tax revenues.

When it comes to new environmental solutions in Polish and Lithuanian tax system, it should be noted that it is important to take into account not only taxes which are not considered to be environmental as such, however, these solution itself are promoting protection of the environment. The example of this may be art. 17.1.4 of Polish Corporate Income Tax Act¹ which provides for exemption of income gained by associations and foundations acting, *inter alia*, for protection of the environment in the amount spent on such protection. This exemption has been included in the Act since its introduction in 1992. A similar exemption has been provided for in the art. 28.1 and 28.2 of Lithuanian Corporate Income Tax Act². This provisions allows certain associations and foundations to reduce tax base with the amount spent, *inter alia*, on protection of the environment (within certain limits). This reduction of tax base has been included in the Act since it was introduced in 2002 and was amended two times already.

It is worth considering the following three examples of environmental tax solutions: a tax on extraction of copper and silver, a waste disposal tax and packaging charge. The tax on extraction of copper and silver has been introduced in 2012 by a Tax on Extraction of Certain Minerals Act³. Even though, this act is general, in reality it imposes tax on KGHM Polska Miedź S.A. (KGHM) only as it is the only taxpayer that deals in Poland with excavation of copper and silver. For this reason, introduction of this tax caused a fierce discussion. Those who were against it claimed it is a ways for the Polish Treasury to seize KGHM’s profits backdoor. Regular way being paying out of dividend by KGHM to its shareholders and among them the Polish Treasury, which controls over 30% of KGHM’s shares. Notwithstanding the fact, that each state has a right to capture part of profits generated by extraction of its natural resources, this tax has been imposed solely for capturing of resource rent and not for environmental reasons. In this respect it is similar to taxes on oil and gas which are OECD has excluded from the range of environmental taxes.

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¹ Ustawa o podatku dochodowym od osób prawnych. Consolidated version of 9.03.2011, Dz.U. Nr 74, poz. 397.
³ Ustawa o podatku od wydobycia niektórych kopalni of 2.03.2012, Dz.U. z 2012 r. poz. 362.
On the other hand, waste disposal tax is an example of purely environmental tax in its very nature. It has been designed and will be introduced since July 1st 2013 by amendment of Act on Keeping Order and Cleanliness in Municipalities\(^1\) to tackle problem of uncontrolled and illegal waste disposal which resulted in polluting of environment, especially forests. Until now, each real estate owner has been obliged to have an agreement for waste treatment with a waste management undertaking (private or municipal). The undertaking was in charge of waste disposal for agreed fee. The main disadvantage of such system was lack of supervision of fulfillment of the obligation to conclude agreements with waste management undertakings. Therefore, there was a large number of those who did not and this have had detrimental effects to the environment. The situation shall change with the introduction of the waste disposal tax. The tax will constitute a revenue of municipalities and will be paid by owners of real estate located in territory of particular municipality. In exchange for the revenue from waste disposal tax, municipalities will be obliged to organise and manage waste disposal on their respective territories. The tax rate is not uniform and may vary from one municipality to another, depending on the use of discretionary powers entrusted to municipality councils for specifying the amount of the tax. Even though the waste disposal tax has been vastly criticized for disputable criteria for calculating its amount, provided for in the Act on Keeping Order and Cleanliness in Municipalities, it is an important move towards proper waste management and, thus, also an important step in greening Polish tax system.

The Lithuanian example of purely environmental tax is pollution tax introduced by Pollution Tax Act\(^2\) which was introduced in 1999. This tax has not only been imposed on sources of pollution harmful to the environment, but also revenues gained from it serve for financing of protection of the environment. Pollution tax provides for taxation of specific sources of pollution which are emissions of certain substances (like SO\(_2\), NO\(_x\), PM) from stationary sources to the air, water and soil, certain products such as tyres, batteries, car-batteries and parts of car engine as well as certain packages (i.e. glass, paper, metal, PET packages) and emissions from means of transport depending on the type of fuel. This tax is imposed on legal and natural persons who conduct economic activity. Revenues accrued by pollution tax are income of national tax budget and local self-governments’ budgets, however, all of such revenues has to be spent on issues related to protection of the environment. Therefore, they constitute direct source of financing tasks in the field of environmental protection what is indisputably beneficial to the environment as such expenses do not need to “compete” with other expenses in national and local budgets.

\(^1\) Ustawa o utrzymaniu porządku i czystości w gminach. Consolidated version of 17.02.2012, Dz.U. z 2012 r. poz. 391.
Conclusions

As the expressions environmental tax reform and greening tax system are used interchangeably and seem to be bearing similar meaning, it would be advisable to differentiate between them. Environmental tax reform should be primarily associated with quantitative measures of shifting tax burden between taxes labour/capital and environmental taxes, whereas, greening tax system should be rather associated with qualitative factors such as direct aim (protection of the environment) of imposing of a particular tax and the way expenses accrued by such tax are spent.

The analysis of environmental taxation in Poland and in Lithuania under the period of 2001-2011 leads to the following conclusions:
- we cannot observe implementation of environmental tax reform in Poland, comparing to the beginning of this period, even though there seem to be slight shift of a tax burden from labour and capital to environmental taxes and environmental taxes constitute slightly higher percentage of GDP.
- we cannot also observe implementation of environmental tax reform in Lithuania, moreover, comparing to the beginning of this period environmental taxes seem to lose their significance as they constitute lower percentage of GDP than in 2001 and lower percentage in revenues from taxes and social contributions.

Therefore, we cannot observe implementation of environmental tax reform under the period of 2001-2011 in either country. Nevertheless, in qualitative terms (without visible shift of tax burden) we may observe an ongoing process of greening national tax systems in both countries. Due to European Union requirements in the field of environmental protection and due to constant development and raising of standard of living, which environment is part of, the process is expected to be continued.

References


Legal Texts


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