

# THEORETICAL AND PRACTICAL PROBLEMS OF ENVIRONMENTAL TAXATION IN CONDITIONS OF THE CZECH REPUBLIC

*Zdeněk Hruška, Lilia Dvořáková*

## Introduction

Environmental taxation has been developing for decades and it started to gain its importance especially with the European Union extending and with the European Union environmental goals unification. Some EU countries introduced the environmental taxes even before the key EC Directive 2003/93 and some countries were made to tax system ecologization by this Directive and by EC Directive 2003/74 [6].

The target of the performed research was to identify the environmental taxing genesis, state and development in the Czech Republic and to find out how the Czech companies and households are aware of the environmental taxes issue. Another goal was to analyse and evaluate how the Czech households and businesses reacted to the environmental taxes introduction. The hereby presented research builds on and develops the results of the partial research in this field which were published by the authors in 2011. The authors present the current scientific knowledge in the environmental taxing field with the intention to contribute to the theoretical and practical development of this issue.

## 1. Methodics

The research was based on the Czech and foreign literature research and also on the statistics datas analysis mainly from the statements published by the administrator of the environmental taxes in the Czech Republic. Documents, valid legislation and reports published mainly by state institutions (The Ministry of Environment of the Czech Republic, Customs administration of the Czech Republic) and by the international organization European Environment Agency

which currently associates thirty-two countries were taken into account. The research also contained analysis of datas and outputs which were the scope of the research.

The research itself was based mainly on documents analysis and two surveys. The questionnaires contained closed, semi-open, filter and inquiry questions. The first questionnaire was given to the households, the second modified questionnaire to the businesses in the Czech Republic. The researched sample was made by a hundred and two households and a hundred and ninety-three businesses. The research was made at households of various sizes living round the whole Czech Republic. The researched businesses were small, middle-sized and large companies operating also round the whole Czech Republic in various fields. Some of the companies operate in other states too. The survey was conducted through personal visits. The participants of questionnaire research in businesses were business owners and employees in positions of top and middle management.

## 2. Process of Environmental Taxes in the Czech Republic

The current environmental taxing does not have a long tradition in the Czech Republic. The first taxes, that at least partially resemble environmental taxes (which were not introduced for environmental reasons but we can assume the reason was mainly fiscal), appeared on the Czech state territory in the 20's of the last century. In Czechoslovakia taxes on ignitors, electrical sources of radiation, mineral oils, coal and motor vehicles [17] existed at that time. From 1882 in the Austro-Hungarian monarchy the kerosene tax was performed. After 1945

there were taxes on mineral oils, matches, coal, electrical sources of radiation [16]. Their introduction was caused mainly by the lack of these products. In 1949 a general tax was introduced and it basically replaced all indirect taxes [16]. From the 1st July 1964 the tax on motor vehicles was introduced and road motor vehicles were subject to it [18]. Although the Czech tax system did not contain environmental taxes till 1992 it does not mean that the environmental damage charge was forgotten. For example in 1967 the emission fees were introduced as well as the fees on waste water discharge in 1979 [5].

If we sum up the above stated and we do not consider the environmental fees, until 1992 the tax system did not contain any special environmental tax scheme. The first legislation note on environmental taxes can be found in the collection of the Law 212/1992 about taxing system from the 15th April 1992. In the § 1 of this law the environment protecting taxes were stated as a part of the taxing system. Nevertheless the environmental taxes were introduced in the Czech Republic in 2008. The first real effort to tax the products with negative effect on the environment is dated to 1997. But the environmental taxes were not introduced again because the original plan to present the law in 1999 was not carried out [10]. The first official draft of the environmental tax reform was prepared by the Ministry of Environment in cooperation with the Ministry of Finance of the Czech Republic in 2000. This draft was discussed by the government in the first half of 2001. After the elections in 2002 the new government set one of its goals to build on the predecessors and perform the environmental tax reform which will follow the revenue neutrality principle. The environmental tax reform draft was made in 2003 but was changed a few times before it was implemented [5].

In January 2007 the new environmental tax reform draft was discussed by the Czech government and the new energy products taxation was approved in May 2007 [5]. Environmental taxes were introduced in the Czech Republic with efficiency from the 1st January 2008 according to the collection of Law 261/2007 about public budgets stabilization. It was about the tax on solid fuels, tax on natural gas and some other gases and electricity tax. In other words these three taxes can be called

together „**the environmental triple tax**“ [9]. We can assume that their introduction was caused mainly by the duties coming from the EC Directive 2003/96 which determines the minimal environmental taxes rates on selected materials. Or it was caused by the EC Directive 2004/74 which granted an exception to the Czech Republic just till 2007. The exception applied also to other countries (e.g. Poland, Hungary, Estonia, Slovenia) and was granted for the reason of possible economical and social difficulties caused by the new environmental taxes introduction. The exception applied exactly to natural gas, solid fuels and electricity. The EC Directive 2003/96 was approved mainly for protection of the internal market and for meeting the objectives of the Kyoto Protocol [12]. However the introduction of the three new environmental taxes was just a part of the environmental tax reform which is taking place in three stages and is planned to be completed in 2017. The process of the environmental tax reform is illustrated in figure 1 (pg. 21). The Czech Republic started the environmental tax reform quite late compared to e.g. northern countries like Sweden, Finland or Denmark which started to carry out the environmental tax reform already in the 80's of the last century. According to the Ministry of Environment the main goal of the environmental tax reform is to stimulate economical subjects to behaviour which leads to reducing the environmental damage and the damage caused to the population health. The subject to the tax are goods and services whose production and consumption leads to verifiable negative impact on the environment and human health. Environmental taxes are therefore correction taxes as we can see in above stated. According to Svatkova [15] the tax should represent the company costs to remove the negative externality or as Kubatova states [11] the environmental tax should internalize the externalities or in other words it should include them in the market costs. The key to reaching the targets of the environmental tax reform lies in aiming the environmental taxes on pollution or other problems connected to the environment [7]. The environmental taxes should also bring so-called double dividend. The principle means two benefits. The first benefit is improving the environment and the second is gaining further income for the state budget which can be later used to reduce

other distortionary taxes (for example taxing work, investments, consumption etc.) [7]. The environmental tax reform also includes setting some exceptions exempt from the tax. It is for example electricity from renewable sources (wind, solar or geothermal energy) or electricity used for public transportation of goods and people on railway, underground or tram [13].

The environmental tax reform should follow these basic criteria [1], [8], [11]:

- transfer the taxing from work and capital to the pollution sources,
- remove the elements of the taxing system which have negative impact on the environment,
- follow the principle „the polluter pays“,
- revenue neutrality.

**The first stage** of the environmental tax reform in the Czech Republic took place in 2008–2009 and it contained introducing the environmental taxes in accordance with the EC Directive 2003/96.

**The second stage** carried out in 2010–2013 should mean transferring selected environmental fees to environmental taxes and the examination of further regulation tools in the environmental field, at present the introduction of the carbon tax is being considered [13]. The impact of the environmental taxes introduction should be evaluated continuously in the second stage. The subjects to the research should be the impacts on the economics a its competitiveness, the impacts on individual groups of population, impacts on the unemployment rate etc. [15]. Another task of this stage should be to pay more attention to transport taxation in accordance with the criteria of the Kyoto Protocol which were negotiated on the 11th December 1997 in the Japanese city of Kyoto and to which the European Union and therefore the Czech Republic committed. In the Czech Republic only some selected vehicles are subject to the transport taxation for now and the flat motor vehicle tax is not planned yet. Furthermore the current motor vehicle taxation takes account of the environmental aspects minimally (as a percentual tax rate reduction, possibly its increase for vehicles registered till the end of 1989). We can see a possible problem for meeting the limits of the Kyoto Protocol. For example in Great Britain they introduced the

company cars tax already after 2002 and this tax takes into account also the production of CO<sub>2</sub> emissions [14].

**The last stage** of the environmental tax reform is preliminarily dated to 2014–2017 when further changes in environmental taxing are considered. Further extension of environmental taxes is probable in the shape of transformation or transfer of some environmental fees to environmental taxes. For example it could be air transport tax, waste tax, wastewater discharge tax or packaging tax. In the third stage of the environmental tax reform we presume the revision and novelization of the EC Directive 2003/96 [13], [15].

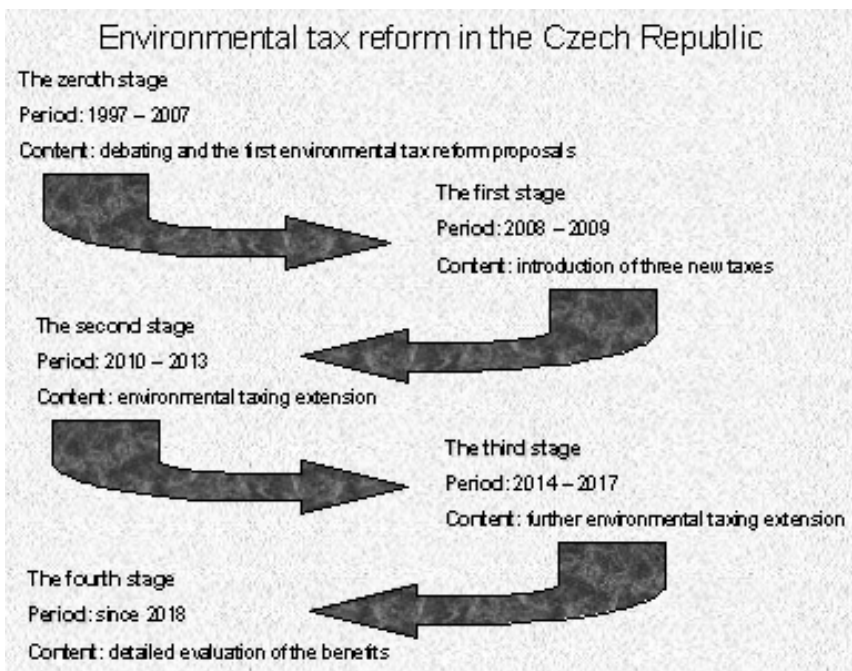
By a deeper conception of the environmental tax reform we can speak of **five stages**. The three already described stages, as figure 1 illustrates, are joined by other two stages. So called **zeroth stage** which took place in 1997–2007 and was the longest of all five stages and contained the first negotiation and real effort to introduce the environmental taxes and to enforce the environmental tax reform.

Considering the continuous development of all aspekts connected to the environmental taxation and the environment we can expect the continuation in the established trend even after the end of the third stage. It would be the **fourth stage** of the environmental tax reform when meeting the targets of the environmental tax reform should be revised in details and the existing benefits and negatives of the reform should be evaluated. Appropriate conclusions should be drawn from the analysis and they should determine which way the environmental tax reform would continue. Now we can speak of five stages of the environmental tax reform and according to the current development it is probable that it is not the final appearance of the reform.

The Ministry of Environment of the Czech Republic presents the main contribution of the environmental tax reform [13]:

- tool for meeting the targets of sustainable development,
- environmental improvement,
- human health improvement,
- increase of economy efficiency,
- work market recovery.

Fig. 1: Environmental Tax Reform in the Czech Republic



Source: own processing, [15]

The basic premise of the environmental tax reform is **revenue neutrality**. In the Czech Republic according to the Ministry of Environment of the Czech Republic the revenue neutrality was fulfilled at first by **social insurance rate reduction** from 8 % to 6.5 % and by **introducing the so-called flat tax on physical entity income** at 15 % and by **reducing the legal entity income tax** from 24 % to 21 %. Legal entity income tax was further reduced to 20 % and later to current 19 %. These steps can be considered insufficient just because the Ministry of Finance of the Czech Republic presented the main reason for the reduction of social insurance paid by employees the compensation of some tax rebates annulment and mainly because it does not apply to some population groups, for example retired people. If we want to hold on to the basic principle of revenue neutrality, the environmental tax reform should bring on one side the introduction and also increase of environmental taxes and on the other hand the reduction of work production

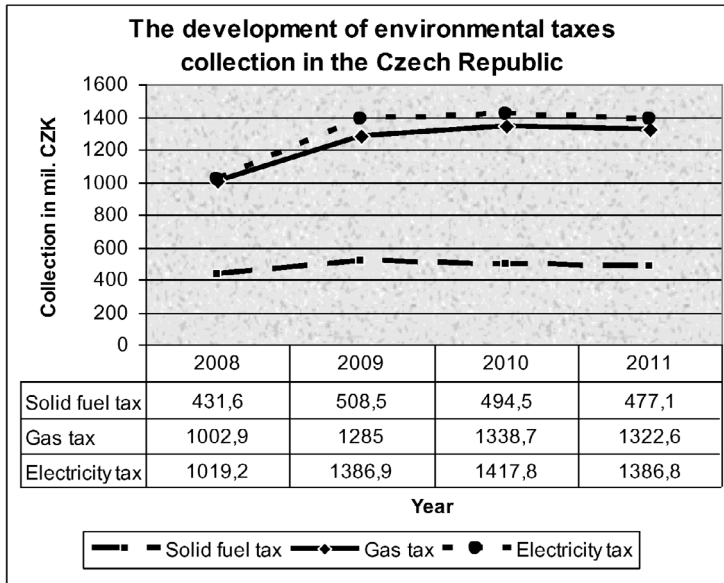
factor taxation. As the final result the work taxation should be transferred to environment pollution and it should support the sustainable development. The environmental tax reform should also start the innovation development, greater use of renewable energy sources and therefore improve the environment [1], [4], [12]. The environmental tax administration in the Czech Republic is done by the **customs authorities** which can also issue two kinds of permissions. They are permission to acquire the exempt energy products and permission to acquire energy products without tax.

Figure 2 illustrates **the amount of collected revenue** from environmental taxes in the Czech Republic since their introduction in 2011. It is clear from the picture that the collection increased at first and in 2011 there was a decrease by all three environmental taxes which could be caused by the saving regulations and innovations introduction and by the consequences of the world economic crisis. According to the current development of the

environmental taxes collection till May 2012 in comparison with the same period last year we

can assume further revenue decrease from the environmental taxes collection this year.

**Fig. 2: The Development of Environmental Taxes Collection in the Czech Republic**



Source: own processing, [2]

### 3. Environmental Taxes and their Influence on Households in the Czech Republic

As mentioned above, the environmental tax reform should respect the principle of revenue neutrality. This principle has been partially followed in the Czech Republic but it does not apply to retired people households, unemployed, mothers on maternity leave, parents on parental leave, students, citizens on sick leave and others. The impact of the environmental tax reform on these groups' family budgets has been negative and we can say that they show signs of so-called „revenue non-neutrality“ of the environmental tax reform. We can expect a hard impact of environmental taxes on households which do not have funds to invest in energy saving equipment. A different environmental taxes impact on households is connected with where they live, if they produce the heat themselves or if they use the central sources (so-called remote heating). As Ekins and Speck state [5], the introduction

of the environmental taxes in the Czech Republic since 2008 has meant 10% increase in the price of coal, coke and semi-coke and 1% increase in the electricity price for the households.

For the environmental taxes impact on households analysis a questionnaire survey was done by **102 households** from all the Czech Republic. **At the first step** of questioning we were detecting how many members an interviewed household has. We found out that one household has one member, twenty-six households have two members, twenty-one households have three members, forty-two households have four members and remaining twelve households have more than four members.

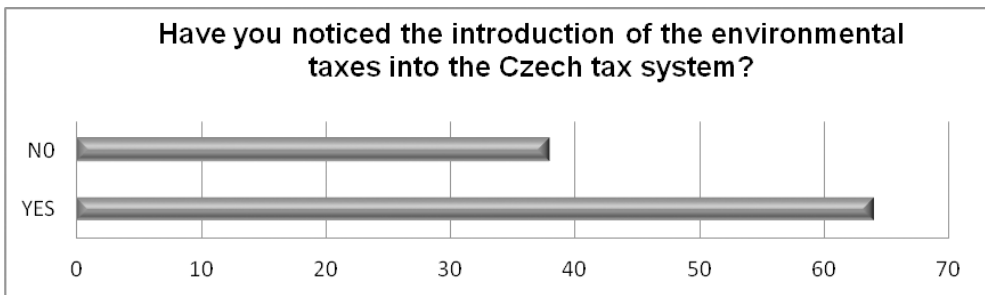
**At the next step** the target was to find out what kind of heating the households use. Out of the questioned households thirty-four use solid fuels (mainly coal and briquettes) for heating their flats and houses, eighteen use electricity, forty-nine use gas and fifteen use another kind of heating.

The **third step** of questioning should determine whether Czech households noticed the increase of energy prices and of what amount approximately. Out of the total amount of questioned households ninety-six households have noticed the increase in energy prices since 1st January 2008. However it is not clearly identified if it was a rise caused by common annual increase in energy prices or a rise for environmental taxes introduction reason. Most of the households (53) cannot determine the exact amount by which the price was increased monthly. Thirty-six households estimated the amount between 200–2000 a month and seven households even higher.

The crucial part of the survey was the **forth step** where the target was to find out if Czech households are aware of introduction of environmental taxes in the Czech taxing system. The results show that the state informed the public insufficiently about the ecologization of the taxing system because thirty-eight households out of the total number of respondents (37 %) did not notice the introduction of environmental

taxes in the Czech Republic at all, as you can see in figure 3. The result is very important because the environmental taxes should work as a **motivation factor** not only on businesses but also on households concerning the investments leading to energy saving and more environmental-friendly behaviour (e.g. purchase of solar panels, exchange the solid fuels heating for gas heating, investment in ecological boilers or investments in appliances with significantly lower electricity consumption or house insulation). If the environmental taxes should have a motivational influence the subjects must be aware of them. The households should be informed by the state not only about their existence itself but in the sense of which amounts are valid within the environmental taxes in energy products prices. At the same time the state should inform the households very **sensitively** so that they do not acquire a **negative attitude** towards the environmental taxes. Unfortunately as the performed research shows none of these were fulfilled in the Czech Republic.

**Fig. 3:** Awareness of Households about the Environmental Taxing in the Czech Republic



Source: own research

Bad awareness of Czech public about environmental taxing is confirmed by the **fifth step** of the research which investigates which environmental taxes relate to individual households. Some households which heat with solid fuels did not know that solid fuels have been taxed by the solid fuel tax since 2008. And on the contrary the households which use gas for heating wrongly believe that the gas price involves the gas tax. But gas for heating is exempt from this tax. All questioned households use electricity so it could be expected that most

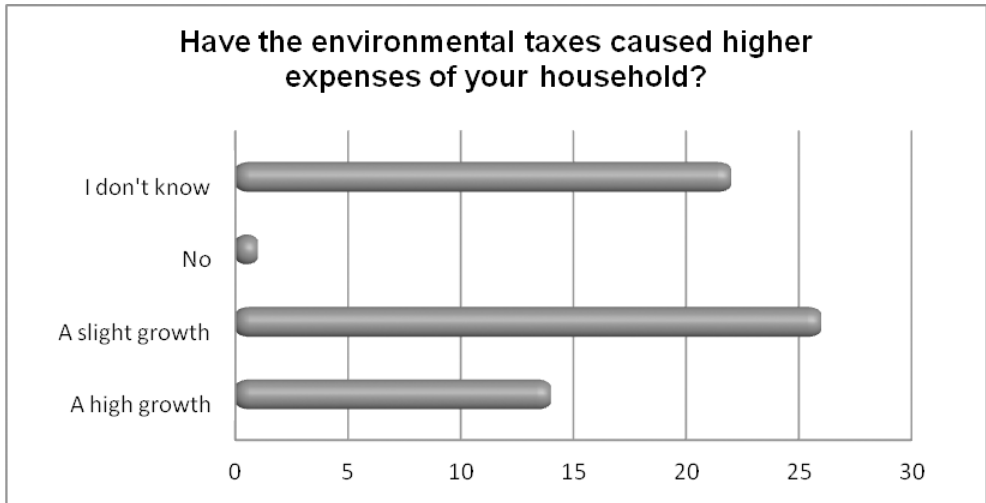
of them answer that the electricity tax applies to them. However only forty-eight households realize that they pay the environmental tax within the price of electricity.

In the **sixth step** sixty-four households which had noticed the introduction of environmental taxes in the Czech taxing system later answered the question if introducing the environmental taxes caused their higher expenses within the energy products price rise. Figure 4 shows the results when twenty-seven households (42 %) noticed a slight growth, fourteen a high growth

(22 %) and twenty-one households (33 %) are not able to identify the growth as a result of introducing the environmental taxing. Only two households stated that the introduction of the environmental taxes into the Czech tax system did not cause their higher expenses. It shows that there are great differences in the awareness about environmental taxing among Czech

households. During the **additional inquiries** among those households which had noticed the introduction of environmental taxes a very important knowledge was found out. They found out about the introduction of environmental taxing mainly from massmedia and a great majority of them had to look for the price increase caused by the environmental taxes introduction themselves.

**Fig. 4: Influence of the Environmental Taxes on Households' Expenses in the Czech Republic**

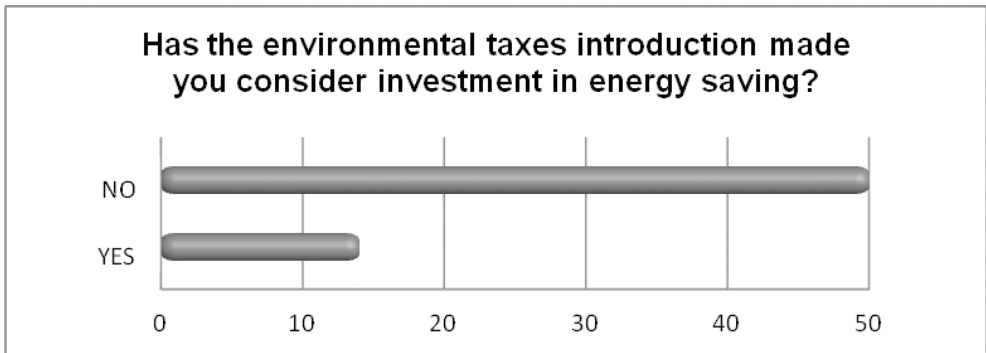


Source: own research

**The seventh step** had a target to find out if Czech households are motivated by introducing the environmental taxes to changes in energy consumption and production. It means mainly the purchase of solar panels for electricity production which is used also for heating and investments which are stated above. As figure 5 illustrates, fifty households haven't made any changes. Fourteen of them invested mainly in the purchase of solar panels or energetically less demanding appliances (especially fridges and washing machines). An interesting result is that nearly half of the interviewed households think that the environmental tax included in the electricity price is much higher than it really is and after the introduction of environmental taxes they invested mainly in energy-saving household appliances. This was found out by semi-open questions also by households which use solid

fuels heating. These households preferred investing in energy-saving household appliances to investing in a more ecological way of heating.

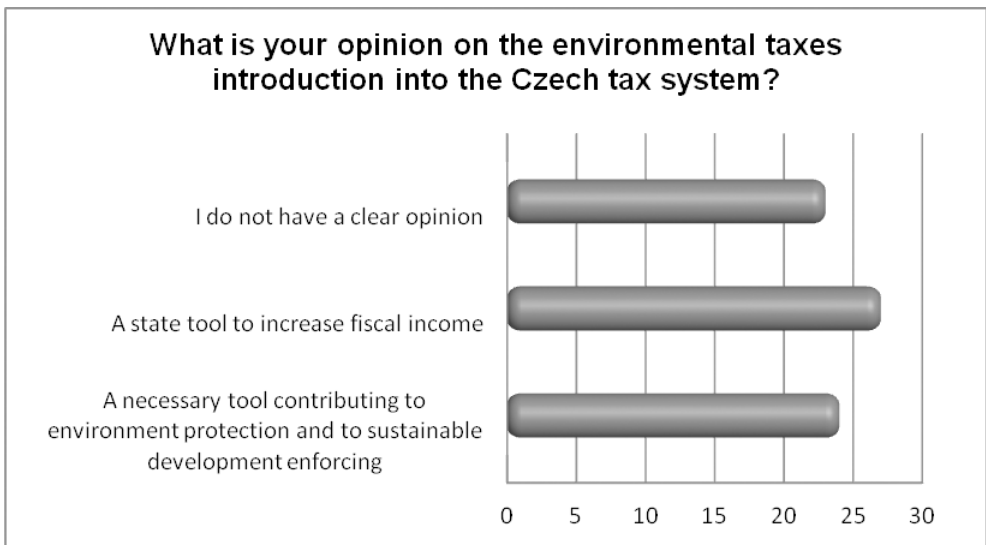
A part of the research was to find out how Czech households see the ecologization of the Czech tax system. An unclear result appeared by this **eighth step**. As figure 6 illustrates twenty-seven households (37 %) out of seventy-four responding (this question was answered by ten households which have not noticed environmental taxes introduction but thanks to the questionnaire they got this information) understands the environmental taxes as a tool for the state to increase fiscal income. Twenty-four households (32 %) see the environmental taxes as a necessary tool for environment protection and for enforcing the sustainable development, the rest of respondents do not have a clear opinion. Even

**Fig. 5:** Influence of the Environmental Taxes on Households in the Czech Republic

Source: own research

here the problem of bad awareness of the households about the ecologization of the Czech tax system steps forward, when the environmental taxes should serve mainly as a state environmental policy tool to protect the environment. However the problem starts by the environmental taxes approval into the Czech tax system itself when their introduction

in the Czech Republic was not done for environmental reasons but because of the EC Directive 2003/96. As the performed research proves the awareness of the Czech households is on a very bad level even regarding the basic principles of the environmental taxes, mainly about their revenue neutrality principle.

**Fig. 6:** The Opinion of Czech Households on the Environmental Taxation

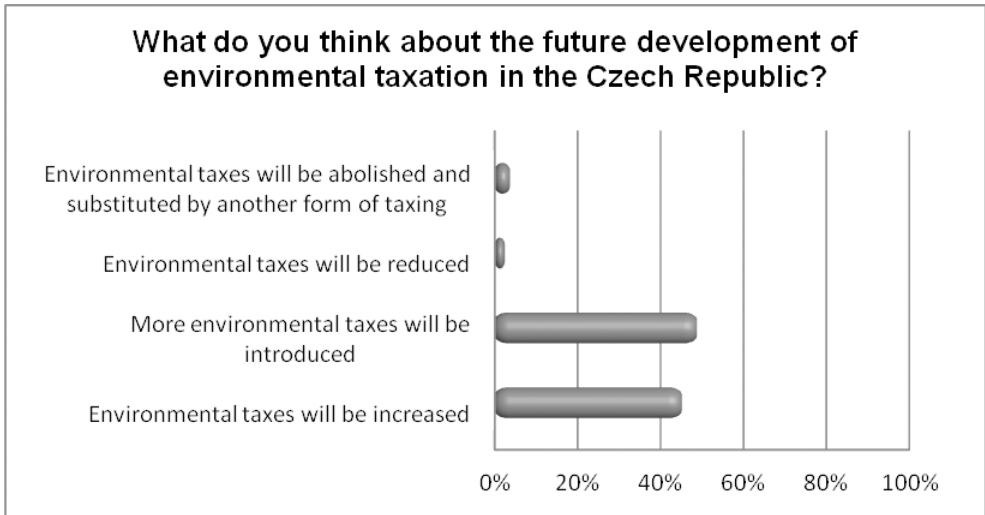
Source: own research



A relatively clear result is coming from the last **ninth step** of the research when the target was to find out the opinion of households on the future development of environmental taxation. The interviewed households are definitely expecting further increase in environmental taxes and extending their amount. This result is illustrated in figure 7. We can expect that these households will adjust their expenses in family budgets, they will follow the suggesting and

approving process of legislative changes concerning the environmental taxes, they will take the change of heating system into account and they will be better prepared for possible increase of current environmental taxes or introducing new kinds of environmental taxes. Only two of the questioned households think that environmental taxes will be reduced and three households stated the opinion that environmental taxes will be abolished and substituted by another form of taxing.

**Fig. 7: Czech Households' Opinion on the Future Development of Environmental Taxation**



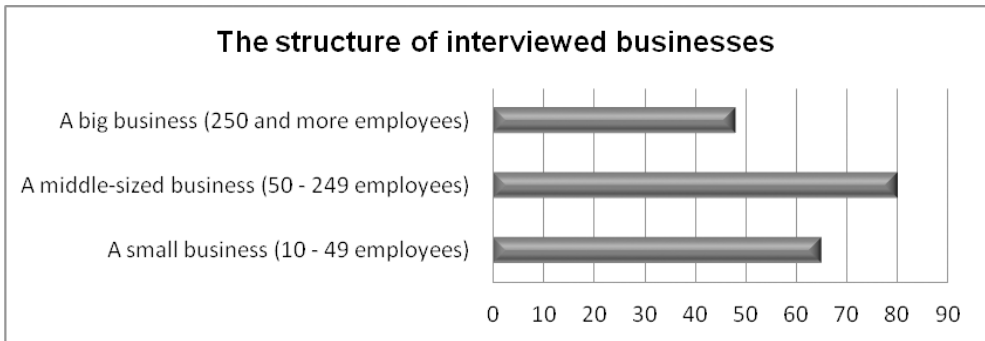
Source: own research

#### 4. Environmental Taxes Influence on Businesses in the Czech Republic

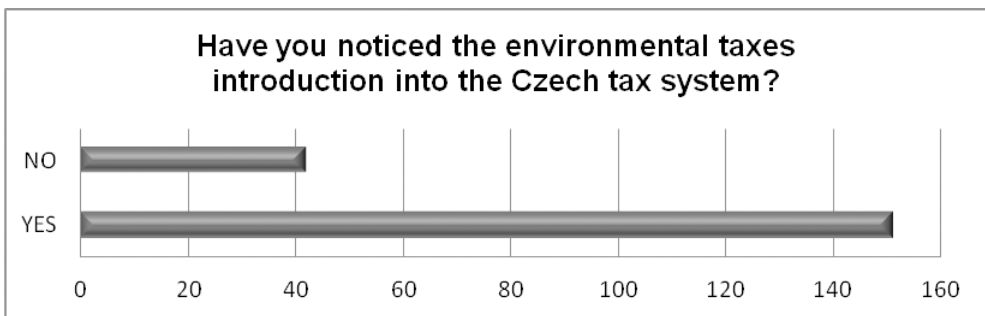
To find out how the environmental taxes influence Czech businesses a questionnaire research was done by **193 businesses** in the Czech Republic. The research consisted of **four steps**. According to the number of employees (see fig. 8) there were sixty-five small businesses, eighty middle-sized businesses and forty-eight big businesses out of the total amount of questioned businesses. The respondent structure contained businesses working across the whole range of the national economy.

The target of the **first step** was to find out if the Czech businesses have noticed the environmental taxes introduction into the Czech

tax system. The first step of the research has brought a serious result when one hundred and fifty-one businesses have realized the environmental taxes introduction and forty-two (22 %) do not know of their existence after more than four years (see fig. 9). As well as by the households, the state informed the businesses insufficiently. The businesses which did not learn about the environmental taxes introduction then probably had a more difficult situation compared to their competitors who were aware of the intended Czech tax system ecologization and could prepare themselves for this step properly. The state authorities should have informed the businesses about the environmental tax reform already after the entry to the European Union. The businesses should have

**Fig. 8: The Structure of Interviewed Businesses**

Source: own research

**Fig. 9: Awareness of Czech Businesses about the Environmental Taxes**

Source: own research

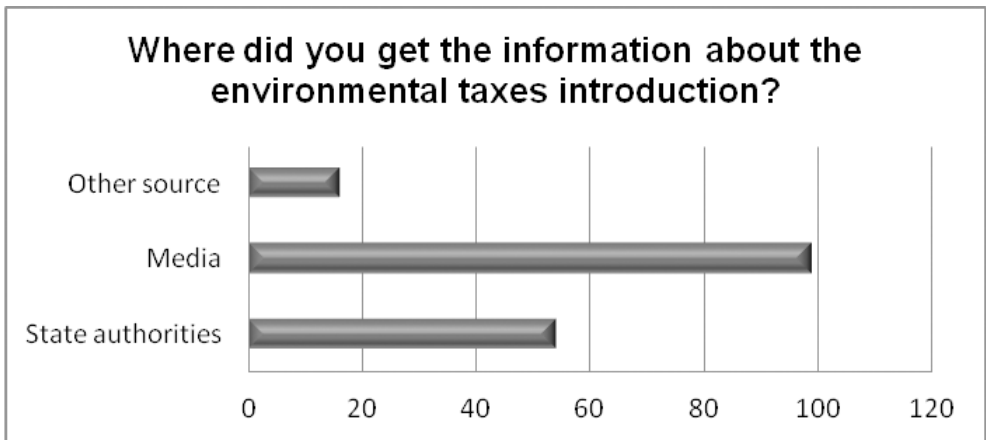
been informed about the exception coming from the EC Directive 2004/74 which lasted till the end of 2007 so as they could get ready for the environmental taxes introduction appropriately.

A part of the first step was also the detection where the businesses got the information about the environmental taxes introduction into the Czech tax system, if they did so. As figure 10 proves only fifty-four businesses received this information from the state authorities. Ninety-nine businesses got the information from the media and sixteen businesses found out about the environment protecting tax introduction from other sources (tax advisor, valid legislation, internet, training, suppliers, accountant, professional literature, professional seminars). Some of the interviewed businesses stated

more sources. As already presented above, the state failed in its informational responsibility towards households and also businesses.

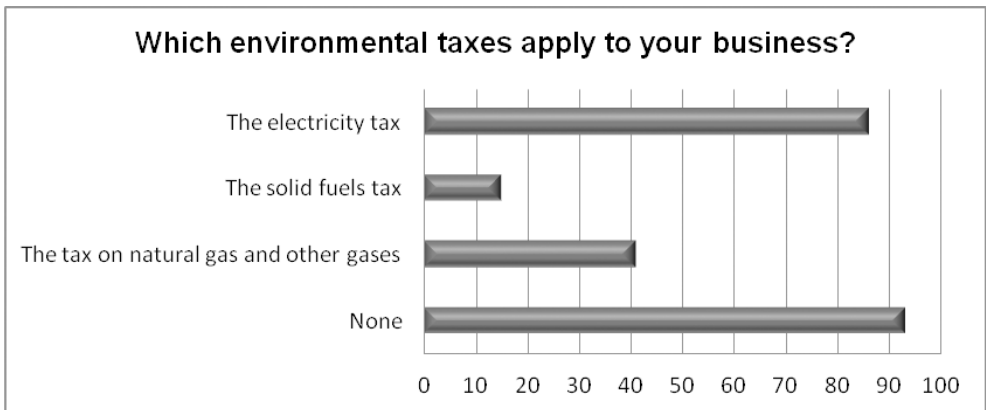
**The second step** of the research included the detection which environmental taxes apply to the businesses which noticed their introduction. Some businesses marked more options (more environmental taxes), on the other hand others said that no environmental taxes concern them. The graphical result overview of the second step is demonstrated in figure 11. We could expect that almost all the interviewed businesses pay the electricity tax. Nevertheless only eighty-six businesses answered that the electricity tax applies to them. The bad awareness of Czech businesses was confirmed again because we can expect that most of the

**Fig. 10: The Information Source about the Czech Tax System Ecologization for the Businesses in the Czech Republic**



Source: own research

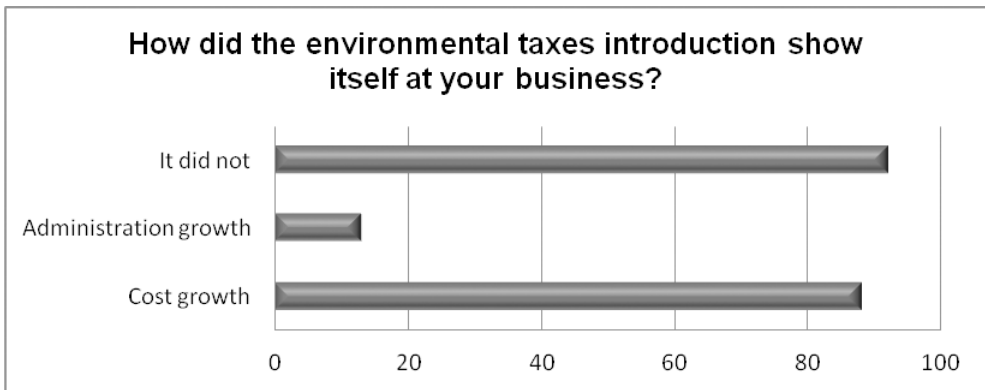
**Fig. 11: The Environmental Taxes in Czech Businesses**



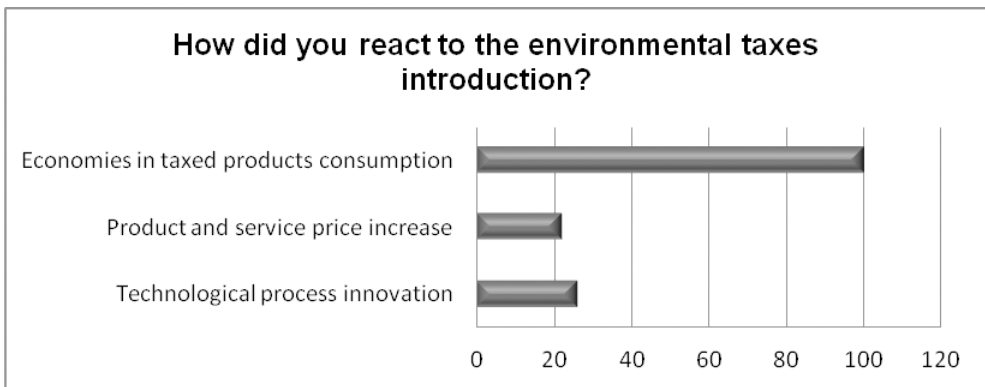
Source: own research

interviewed businesses use the electricity (not exempt from tax) for their activities and therefore they pay the environmental tax within the electricity price. Ninety-three businesses marked the answer that no environmental taxes apply to them. The tax on natural gas and some other gases concerns forty-one businesses according to the survey. The solid fuel tax was marked by fifteen businesses.

The target of **the third step** was to find out how the environmental tax introduction showed itself at those Czech businesses which noticed the environment protecting taxes introduction (see figure 12). Total eighty-eight businesses noticed the cost growth because of the environmental taxes introduction into the Czech tax system. For thirteen businesses it meant the administration growth and it did not show at all at ninety-two businesses.

**Fig. 12: The Environmental Taxes Influence on the Businesses in the Czech Republic**

Source: own research

**Fig. 13: The Czech Businesses Reaction to the Environmental Taxes Introduction**

Source: own research

**The last step** of the research was supposed to find out how the businesses, which noticed the environmental taxes introduction in the Czech tax system, reacted to this act. The result was positive because one hundred businesses reacted by economies introduction. Twenty-nine businesses reacted by technological process innovations and only twenty-two businesses (15 %) increased the product or service prices (see figure 13). As the final result the environmental tax reform could lead to increasing the number of innovations,

which can be called eco-innovations. The eco-innovations according to the European Environment Agency [3] present the technological development generating products, equipment or processes leading to environment pollution reduction and to reduction of non-renewable natural sources use.

## Conclusion

The research results in the area of implementation of environmental taxation in the Czech

Republic brought new qualitative and quantitative information for the development of the theory and practice in the area of environmental taxation.

The environmental tax reform has been going on in three stages in the Czech Republic but we can speak of **five stages** altogether. The environmental taxes can serve as a very **effective tool** for improving the environment as well as for the state economics development if all the rules and principles of the environmental tax reform are followed. As the previous text shows, it is especially important to follow **the principle of revenue neutrality** and to connect the environmental taxes introduction with work tax reduction. The environment improvement can be gained by **taxation of negative externalities** which cause pollution and by **motivating** the households and businesses to steps leading to non-renewable sources consumption reduction and to environmental burden reduction.

The performed research showed that the crucial problem of the environmental tax reform is mainly **non-sufficient awareness** of the households and businesses in the Czech Republic about its progress and especially about its reasons. These subjects could hardly make steps improving the environment. The research performed among households uncovered that **37 %** of interviewed households are not aware of the environmental taxes existence even after more than four years. The result among businesses was also dismal (22 % businesses do not know about environmental taxes). The research proved the failure of the state in informing on the environmental tax reform and also in other steps, for example when the businesses learned about the environmental taxes mostly from the media. The research also shows that most of the interviewed households were not motivated to investments leading to the environment improvement (energy saving products, change of house heating, etc.) by the environmental taxing. Only 32 % interviewed households understands the environmental taxes as a necessary tool to environment protection and most of the interviewed households expects their further growth or extension. A positively evaluated result of the research can be that only **15 %** of the interviewed businesses increased their product

and service prices because of the environmental taxes introduction into the Czech tax system.

By the ecologization of the Czech tax system the state authorities should also consider the low-income households and households which do not directly apply to the work taxation reduction and therefore the environmental taxes impact them in full height. The state authorities should also **inform the households and businesses better** about the Czech tax system ecologization and they should inform in a way to motivate the subjects to steps leading to environmental improvement. From the performed research we can assume that in the Czech society there has been a resentment towards any taxes and new taxes introduction is followed by disapproving attitude of households as well as businesses. To inform and to change the attitude towards the environmental taxes the state could use a whole scale of tools from the marketing field. This area might be the subject of further research.

*The article was processed with the support of the project SGS-2012-022 Financial Management Theory and Practice Development.*

## References

- [1] BOSQUET, B. Environmental tax reform: does it work? A survey of the empirical evidence. *Ecological Economics*. 2000, Iss. 1, Vol. 34, pp. 19–32. ISSN 0921-8009.
- [2] CELNÍ SPRÁVA ČR. *Statistiky z daňové oblasti: Statistiky z oblasti ekologických daní* [online]. Praha: Generální ředitelství cel, c2008–2012 [cit. 2012-07-16]. Available from: <<http://www.celni.sprava.cz/cz/dane/statistiky/Stranky/ekodane.aspx>>.
- [3] EUROPEAN ENVIRONMENT AGENCY. Environmental tax reform in Europe: opportunities for eco-innovation. *EEA Technical report*. 2011, No. 17. ISSN 1725-2237.
- [4] EUROPEAN ENVIRONMENT AGENCY. *Environmental tax reform: increasing individual incomes and boosting innovation* [online]. Copenhagen: European Environment Agency, 2012 [cit. 2012-07-21]. Available from: <<http://www.eea.europa.eu/highlights/environmental-tax-reform-increasing-individual>>.
- [5] EKINS, P. and SPECK, S. *Environmental Tax Reform*. New York: Oxford University Press Inc., 2011. ISBN 978-0-19-958450-5.

- [6] EKINS, P. European environmental taxes and charges: recent experience, issues and trends. *Ecological Economics*. 1999, Iss. 1, Vol. 31, pp. 39–62. ISSN 0921-8009.
- [7] FULLERTON, D., LEICESTER, A. and SMITH, S. Environmental taxes. *NBER Working Paper No. 14197* [online]. Cambridge: National Bureau of Economic Research, 2008 [cit. 2012-06-18]. 59 p. (PDF). Available from: <[http://www.nber.org/papers/w14197.pdf?new\\_window=1](http://www.nber.org/papers/w14197.pdf?new_window=1)>.
- [8] HOLMLUND, B. and KOLM, A. Environmental Tax Reform in a Small Open Economy With Structural Unemployment. *International Tax and Public Finance*. 2000, Iss. 3, Vol. 7, pp. 315–333. ISSN 0927-5940.
- [9] HRUŠKA, Z. and DVOŘÁKOVÁ, L. Geneze a vývoj ekologického zdanění v České republice a ve Spolkové republice Německo. In HOROVÁ, M. (ed.). *Trendy v podnikání 2011*. 1. vyd. Plzeň: Západočeská univerzita, 2011. ISBN 978-80-261-0051-5.
- [10] KORBA, K. and ZIMMERMANNOVÁ, J. Ekologická daňová reforma a příprava nových daňových zákonů. *PRO-ENERGY*. 2007, pp. 50–51. ISSN 1802-4599.
- [11] KUBÁTOVÁ, K. *Daňová teorie a politika*. Praha: Wolters Kluwer ČR, 2010. ISBN 978-80-7357-574-8.
- [12] LÁCHOVÁ, L. *Daňové systémy v globálním světě*. Praha: ASPI, 2007. ISBN 978-80-7357-320-1.
- [13] MINISTERSTVO ŽIVOTNÍHO PROSTŘEDÍ ČR. *Ekologická daňová reforma: Principy a harmonogram ekologické daňové reformy* [online]. Praha: MŽPČR, 2007 [cit. 2012-07-06]. Available from: <[http://www.mzp.cz/cz/principy\\_harmonogram](http://www.mzp.cz/cz/principy_harmonogram)>.
- [14] RUSSELL, D. Towards Ecological Taxation: The Efficacy of Emissions-Related Motor Taxation. Farnham: Gower Publishing Limited, 2011. ISBN 978-0-566-08979-4.
- [15] SVÁTKOVÁ, S. *Spotřební a ekologické daně v České republice*. Praha: Wolters Kluwer ČR, 2009. ISBN 978-80-7357-443-7.
- [16] STARÝ, M. et al. *Dějiny daní a poplatků*. Praha: Havlíček Brain Team, 2009. ISBN 978-80-87109-15-1.
- [17] ŠIROKÝ, J. et al. *Daňové teorie s praktickou aplikací*. Praha: C. H. Beck, 2008. ISBN 978-80-7400-005-8.
- [18] Zákon č. 98 ze dne 5. 6. 1964 o dani z motorových vozidel.
- [19] Zákon č. 261 ze dne 19. 9. 2007 o stabilizaci veřejných rozpočtů.

**Ing. Zdeněk Hruška**

Západočeská univerzita v Plzni

Fakulta ekonomická

Katedra financí a účetnictví

hruskaz@kfu.zcu.cz

**prof. Ing. Lilia Dvořáková, CSc.**

Západočeská univerzita v Plzni

Fakulta ekonomická

Katedra financí a účetnictví

ldvorako@kfu.zcu.cz

Doručeno redakci: 5. 10. 2012

Recenzováno: 19. 11. 2012, 26. 11. 2012

Schváleno k publikování: 17. 1. 2013

## **THEORETICAL AND PRACTICAL PROBLEMS OF ENVIRONMENTAL TAXATION IN CONDITIONS OF THE CZECH REPUBLIC**

**Zdeněk Hruška, Lilia Dvořáková**

*The paper presents the research results in the field of environmental taxation in the conditions of the Czech Republic which was performed in 2011 and 2012. At first the theoretical analysis of environmental taxation genesis, current state and development in the Czech territory is carried out. Then the environmental tax reform in the Czech Republic is examined when the theory is supplemented by authors' own knowledge. At present the environmental taxation belongs to important tools of the state fiscal policy to gain further state budget income, to improve the environment and also to implement the concept of sustainable development. The principles of the environmental tax reform, which are researched in the paper, must be followed to accomplish these.*

*In the next part of the paper the research results on the environmental taxation influence on households in the Czech Republic are presented and the focus is to determine the awareness of Czech households about environmental taxes. The Czech households reactions to the environmental taxes introduction are also researched. Important results of the performed survey of a hundred and two households are analysed in the paper.*

*The paper also analyses and evaluates environmental taxation in relation to businesses operating in the Czech Republic. A survey of a hundred and ninety-three firms was carried out for this purpose. The results showed serious facts mainly concerning the awareness and reactions of Czech businesses to the Czech tax system ecologization. The content of the paper includes a formulated recommendation to the state authorities in the future stages of the ongoing environmental tax reform in the Czech Republic. Their detailed analysis including the environmental taxes impact on economics and its competitiveness will be the scope of research in the following period.*

**Key Words:** *environmental tax reform, environmental taxes, household, business, revenue neutrality principle.*

**JEL Classification:** *H23, H31, H32.*