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Development of the environmental taxes and charges system in Estonia: international convergence mechanisms and local factors

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It is often claimed that the development of new policy areas (e.g. environmental policy, innovation policy) in Central and Eastern European (CEE) countries was initiated and influenced by international events and organizations (e.g. the European Union, International Monetary Fund, and United Nations) in the 1990s when these countries became independent and opened up to the Western world. This article seeks to clarify the importance and role of exogenous and endogenous explanatory factors in the adoption and development of new policy instruments (NPIs). This article proposes an adjusted theoretical framework of convergence mechanisms and a brief systemized overview of local factors to analyze and explain to what extent international factors influenced the development process of new fiscal instruments in practice in CEE countries with the example of the establishment of the environmental taxes and charges system in Estonia. Based on qualitative interviews with Estonian environmental policy experts as well as law and document analysis, this article concludes that the Estonian case study highlights the significance of policy learning, harmonization, and coercive imposition but most apparently, and contrary to common belief, different domestic factors have played a more essential role in shaping the NPIs.

Keywords: international convergence mechanisms; local factors; spread and development of new policy instruments (environmental taxes and charges system); CEE countries

Introduction

Until the end of the twentieth century, ‘command and control’ instruments (laws, standards, etc.) have been the most popular environmental policy instruments (EPIs), also called the traditional EPIs. The beginning of the twenty-first century brought the rise of more flexible and effective measures, innovative, and new EPIs including also the economic instruments and among them environmental taxes and charges. Together with other new policy instruments (NPIs) they started to attract the attention of policy researchers interested in the spread and convergence of policy goals, principles, and instruments between different countries and regions. Tews, Busch, and Jörgens (2003), Jordan et al. (2003), Busch and Jörgens (2005a, 2005b), and Kern, Jörgens, and Jänicke (2001) have analyzed the spread and diffusion of new EPIs in rich detail. The rapid international implementation of these NPIs generated the interest and necessity to understand the causal factors driving these internationally spreading processes. These

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causal factors are the international convergence mechanisms (co-operative harmonization, coercive imposition, and interdependent but uncoordinated diffusion) of NPIs that will be analyzed in the following in more detail. However, it has to be kept in mind that the complete design of policy instruments is influenced also by the domestic context including culture, history, and institutions (Rose 1991, 21 and in detail Bennett 1991) and the special characteristics of the NPIs (Tews, Busch, and Jörgens 2003).

The goal of this article is to clarify the importance and role of exogenous and endogenous explanatory factors that have influenced the adoption and development of NPIs in Central and Eastern European (CEE) countries with the example of the development of the environmental taxes and charges system in Estonia. The main focus is not only on international convergence mechanisms (as these are believed to play an important role in the CEE countries), but also a short overview of local factors is brought out and analyzed. The second additional aim is to shed light upon and create an integrated approach to the formation process of the environmental taxes and charges system in Estonia with the example of instruments influencing the energy sector. The use of similar instruments in different countries and regions raises several questions, and the developments in Estonia make it possible to analyze these issues in the CEE context. First, how influential are international factors (convergence mechanisms) from the perspective of domestic policy-makers and experts? Second, what kind of domestic features could have also affected the formation of the system? Third, which factors have been the prevalent causes?

The Estonian case is interesting because the local context makes it possible to test the general belief whether international actors and factors (e.g. International Monetary Fund [IMF], United Nations [UN] but more specifically the European Union (EU) and Europeanization) have had an important role in the development of environmental policies in CEE countries because these countries were closed to the West until the beginning of the 1990s and had to build up new independent systems on their own taking more after the West because of their reluctance to the Soviet system. This could mean that international convergence mechanisms can be expected to have played an essential role in the formation of environmental taxes and charges systems in these countries as part of environmental policy. Therefore, the Estonian in-depth context analysis could serve as a typical case study analysis.

On the one hand, it must be stressed that the conclusions from this single-country case study belong to this specific case and cannot necessarily be generalized to other similar cases in all matters. On the other hand, an in-depth case study makes it possible to analyze in more detail the interaction between different explanatory factors and causal mechanisms that affect the developments and outcomes. Therefore, this analysis can also serve as an input to future comparative studies that examine the factors influencing the spread of NPIs in various countries in the environmental area.

In general, the existing literature brings out three broad factors that are considered to play a role in the development, spread and convergence of new EPIs, and also the formation of complex systems (or packages) of policy instruments: international factors or convergence mechanisms (Busch and Jörgens 2005a, 2005b; Jordan et al. 2003; Kern, Jörgens, and Jänicke 2001; Tews, Busch, and Jörgens 2003; Tews 2005), the domestic context (Rose 1991, 21 and in detail Bennett 1991), and the special characteristics of the NPIs (Tews, Busch, and Jörgens 2003). Because of space limitations, the focus is on international and domestic factors. Due to the same reason, and also in order to focus the analysis, only the main environmental taxes and charges related to the energy sector are
under investigation. The energy industry is a useful sector to analyze because on the one hand, it is the largest producer of pollution but on the other, the sector is strongly related to national and international security issues. The climate change discussion, renewable energy, and so on are internationally important topics, and therefore international influence could potentially play a more substantial role in the domestic development of the energy-sector regulations.

To analyze and understand the influence of international and local factors on the development process of the Estonian environmental taxes and charges system qualitative interviews with open-ended questions were conducted among local environmental policy experts (see Appendix 1) using the snowball method. In addition, an analysis of documents (laws, regulations, their explanatory notes, and other documents) was used to supplement the findings of interviews with more factual data. For comparative reasons also descriptive international experience was used based on a brief literature analysis.

This article is organized as follows. The relationship between specific international convergence mechanisms and the development and spread of environmental taxes and charges together with a brief overview of domestic factors influencing the adoption of new policy ideas is examined in Section 2. Section 3 draws upon a historical analysis of the adoption and development trajectories of the environmental taxes and charges system in Estonia focusing on the factors explaining the system’s formation. Section 4 discusses the Estonian case in light of the theoretical framework and examines the influence of different factors on the formation process. Section 5 draws conclusions.

Literature review and theoretical framework

Convergence mechanisms

Studies analyzing the international diffusion and convergence of new EPIs can broadly be divided into three types:

- Transfer of environmental policy and innovative instruments in the EU (Jordan et al. 2003), where the focus is on the introduction and implementation dynamics in the EU and the role of policy transfer in this process.
- The relationship between the diffusion of new EPIs, environmental policy change, and convergence, its sources and patterns (Busch and Jörgens 2005a, 2005b; Busch, Jörgens, and Tews 2005), based on the three mechanisms (co-operative harmonization, coercive imposition, and interdependent but uncoordinated diffusion).
- Voluntary diffusion of environmental policy innovations (Kern, Jörgens, and Jänicke 2001; Tews, Busch, and Jörgens 2003; Tews 2005), where states start using certain policies, by learning, emulating, or imitating.

In this study only one new group of EPIs (environmental taxes and charges) is explored; therefore, concentrating on multiple explanatory factors that have shaped the development and spread of the instruments under study is essential to broaden the scope of the analysis. It is important to note that the international factors affecting the spread of NPIs that are explored in this analysis are also the different means of policy diffusion in the broader sense. In addition, they are also the specific convergence mechanisms by Busch and Jörgens (2005a, 2005b), whose approach is taken as the basis for this analysis. According to Knill (2005, 766), the same concepts form the wide approach of policy
diffusion that links the spread of policy ideas between countries with three specific causal factors that drive these developments. These mechanisms consider the impact of different actors (e.g. EU and other interstate and supranational organizations), but they also take into consideration the activities, power, and consequent instruments of these actors in the general spreading and convergence processes. Besides the dynamics of the international system, policy transfer and the scope of convergence are significantly influenced also by the local context and factors from the institutional, social, and historical perspective (see, e.g. Pedersen 2007) that will be analyzed briefly in the following, and also by the specific characteristics of the instruments that are, however, outside the scope of this analysis.¹

**Specific convergence mechanisms**

Busch and Jörgens (2005a, 863–867) have developed the following typology of the international causes of new EPIs’ convergence including three classes of factors.² This is useful to systematize the impact of international processes on domestic policy-making and supporting convergence (Busch and Jörgens 2005a, 862): (1) co-operative harmonization of local practise by means of international legal agreements and supranational law; (2) coercive imposition of political practices through economic, political, and even military threat, intervention, or conditionality; and (3) interdependent but uncoordinated diffusion of practices by means of cross-national imitation, emulation, and learning (see Table 1).

Table 1. The international sources of policy convergence.

<table>
<thead>
<tr>
<th>Mechanisms</th>
<th>Diffusion</th>
<th>Harmonization</th>
<th>Imposition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mode of operation</td>
<td>Persuasion, emulation, learning, Decentralized decision-making</td>
<td>Negotiation, enforcement and monitoring, Centralized and joint decision-making</td>
<td>Coercion, economic or political conditionality, Decentralized decision-making</td>
</tr>
<tr>
<td>Principal motivations of national policy-makers to adopt external policy models</td>
<td>Search for effective solutions for domestic problems, Gain international and external legitimacy</td>
<td>Manage effectively transboundary challenges and at the same time dissatisfaction with solutions to transboundary challenges provided for by unilateral action, Avoid negative externalities (e.g. trade distortions), Realize positive gains (e.g. access to new markets)</td>
<td>Export fundamental values and principles as well as policies perceived to be successful, Access to economic and political resources (e.g. join international decision-making bodies or gain financial support), Avoid negative consequences (e.g. sanctions)</td>
</tr>
<tr>
<td>Degree of influence on design of policy innovation and decision to adopt it</td>
<td>Low</td>
<td>High</td>
<td></td>
</tr>
</tbody>
</table>

Source: Busch and Jörgens (2005a, 867).
Busch and Jörgens (2005a, 862) have distinguished between the three types according to their mode of operation, primary motivation of policy-makers to adopt policies, and the freedom of action and independence they grant national policy-makers to influence the policy content and to decide on the adoption of policies. Busch and Jörgens (2005a, 866) stress that these mechanisms are three ideal types and their borders are rather blurred in the real world. In addition, Bennett (1991, 230–231) claims that most likely the influence of the three different mechanisms can vary throughout the life cycle of a NPI.

**Relationship between the development and spread of environmental taxes and charges and the specific convergence mechanisms: brief international practice**

When environmental protection came into the world’s agenda in the 1970s, countries also started to look for more flexible and effective instruments that would supplement or even displace the old and rigid ‘command and control’ measures. Mainly because of the specific characteristics of environmental taxes and charges and the overall reluctance against taxes their implementation was delayed until the end of the 1980s, when the Nordic countries started to experiment with the NPIs. However, Pigou’s (1912, 1920 [1932]) theories from 1912 about integrating a tax equal to the cost of pollution (negative externality) into the price were known worldwide.

The rise of economic instruments and consciousness of environmental problems is proved by multiple international agreements³ that enact the goals for pollution reduction for individual member states, and also the activity of international organizations (e.g. EU, Organization for Economic Co-operation and Development [OECD], and UN) to promote environmental protection and the use of more flexible economic and informational EPIs. Though in many cases, it is just a rhetorical evidence because little is known about the real practices and outcomes that are also much more complicated to analyze. Tews (2005, 67–68) brings out that the global spread of new EPIs and domestic activation in the same field falls into the same period when environmental questions were most considerable in international communication for the first time – the two UN environmental conferences Human Environment in Stockholm in 1972 and Environment and Development in Rio de Janeiro in 1992. The latter can be seen as more important for the international diffusion of environmental taxes and charges because cost-covering and earmarked user charges were introduced in the 1970s, incentive taxes in the 1980s, fiscal environmental taxes at the beginning of the 1990s, and the overall spreading process of the new EPIs was activated in the middle of the 1990s (European Environmental Agency [EEA] 1996, 21–24; OECD 1999, 11–12; see Figure 1). Although, as Baumol and Oates (1989) conclude, the demand for environmental taxes was felt even in the 1970s, but the previous developments confirm that being aware of environmental problems and also knowing effective solutions is not enough. The Scandinavian, and a bit later also the Western European, practice with adopting energy taxes shows that a sufficiently high economic level of development is also a necessary prerequisite. On the other hand, the implementation of environmental taxes and charges might also be motivated by the need for environmental investments and additional revenues for the state budget. This is the case in the CEE countries because these countries needed resources to manage environmental problems and build up the new independent system.

The first group of instruments (cost-covering user charges) were introduced in a few countries in the 1970s with the aim to cover the administrative costs of regulative instruments (EEA 1996, 21, Figure 1). In addition, the need to manage environmental
exploitation and fund environmental projects (due to huge domestic environmental problems) could also have been essential incentives. Besides, the evolving literature about the efficiency of pollution taxes also strengthened its position in international discussions. However, the activity of international organizations in the field is not apparent during this period because there are no analyses or comparative publications available. For example, the first OECD overview about economic instruments in member states’ environmental policy was established in 1989 (OECD 1989). We can assume that the adoption of these new EPIs was related to the emerged necessity to manage environmental problems more effectively and cover the costs of administrating the field. Inventing compensation mechanisms that would motivate polluters to contaminate the environment less and improve their technology is more characteristic of the incentive-based taxes introduced in the 1980s. According to Busch and Jörgens’s three-fold typology of NPIs’ international causes of convergence, the development and spread of the new EPIs under study would be related to voluntary diffusion because no concrete political or economic obligation is apparent on the international level. More likely it is the case of general consciousness of domestic needs and later learning and imitating other countries’ practices.

The adoption of incentive-based consumer taxes and fiscal environmental taxes during the change of the 1980s and 1990s and the wider diffusion during the 1990s and 2000s can be more clearly related to the awareness and understanding of common transboundary problems with environmental pollution. Countries started to look for unified international alternatives to solve the problems related with regulatory competition (Dunoff 2007, 91–94). The progression in adopting fiscal environmental taxes could be linked with the spread of environmental tax reforms at the beginning of the 1990s with the aim to increase environmental taxes in order to decrease other taxes, for example, labour taxes (European Commission [EC] 2005, 74). Holzinger, Knill, and Sommerer (2008, 583–584) explain that environmental policies move toward stricter regulations and standards and become more similar (this is steered by leading countries in the field), and convergence is mainly influenced by international harmonization of policies (e.g. EU) and communication and interaction networks between countries. This is the case with EU energy taxes and their coerciveness to member states without much freedom to influence the design and implementation of the instruments. The adoption of energy taxation requirements among EU member states is, therefore, a good example of Busch and Jörgens’s (2005a) mechanisms of harmonization and coercive imposition. We can assume

![Figure 1. A general illustration of the chronological development of environmental taxes.](image-url)
that the more a country is obliged to and dependent on an organization, union, and so on, in which it is a member, the more binding are the mechanisms of convergence and the outcomes therefore more homogenized. EU directives are comprehensive to all member states, but different convergence mechanisms are apparent in adopting the same instruments across old and new member states: in the case of old states, which have taken part in the elaboration of the directive, legal harmonization is evident because these countries were involved in the design of the EU policies; in the case of new member states that joined in 2004 and 2007, coercive imposition is apparent because they did not have any opportunities to affect the policy-making process. In this way, the autonomy of local policy-makers to adopt NPIs is strictly constrained although the EU also considered the individual situation of the new member states in the adoption time schedule.

Domestic factors influencing the adoption of NPIs

The national context and culture can be expected to play a very essential role in the adoption of NPIs. It is definitely easier to harmonize similar goals and policies already in place. Communication networks play the same essential role and make it possible to spread best practices and learn from the experience of others in a continuous dialog. Tews, Busch, and Jörgens (2003, 575) argue that specific national capacities are needed to adopt innovative EPIs. The demand for and feasibility of NPIs is influenced by the political, economic, societal, and institutional capacities of any particular country (Kern, Jörgens, and Jänicke 2001, 8). In addition, Botcheva and Martin (2001, 13) argue that cross-national variations in the existence, organization, and opportunities for access of domestic pressure groups may affect the impact of so-called ‘international aspirational institutions.’ Tews, Busch, and Jörgens (2003, 575) claim that those aspirational institutions matter only in countries where well-organized interest groups and adequate opportunities for access exist because these groups may use international norms to put pressure on their governments for policy change.

The national capacities are especially related to the legacy of past policies, administrative traditions, regulatory structures, and policy styles. The emphasis on ‘administrative fit’ or the ‘logic of appropriateness’ (March and Olsen 1989) is based on the general assumption ‘that institutionally grown structures and routines prevent easy adaptation to exogenous pressure’ (Knill and Lenschow 1998, 2). Hoberg (2001, 127) and Jordan (2001, 20) see these issues even as forces promoting divergence. Kern, Jörgens, and Jänicke (2001) argue that national institutional arrangements serve as filters to the adoption of NPIs – they may prevent or even delay the adoption of path-deviant policies, but mainly they will be responsible for variations in the degree of convergence, affecting policy similarities in policy ideas and approaches, the utilization of particular policy instruments, or the qualitative level of regulation (Tews, Busch, and Jörgens 2003, 576). Therefore, a global convergence of policies will never exclude divergent national adaptations (Tews, Busch, and Jörgens 2003, 576) or, as Rose (1991, 21) claims, ‘we would never expect a program to transfer from one government to another without history, culture and institutions being taken into account.’

Tews, Busch, and Jörgens (2003, 576) come to the conclusion that domestic factors play a significant role in policy adoption (more in the early stage of the diffusion process but also at a later stage, or they might even be resisted altogether), but the influence may differ for each policy adoption during the whole process as domestic factors may be
overshadowed by international dynamics of the norms themselves. Also domestic factors help to explain national variations in the design of NPIs.

The development of the environmental taxes and charges system in Estonia from the end of the 1980s

Based on the interviews with environmental experts (see Appendix 1) and document analysis, specific explanatory factors that have influenced the adoption and development of the Estonian environmental taxes and charges system and taxes and charges related to the energy sector in particular, are brought out and analyzed in a historical sequence. The analysis is divided between environmental charges and taxes because their aims, implementations, and causal factors in their development have been different. The periodization is based on the main turning points in the development trajectories.

Environmental charges

The end of the 1980s and the 1990s

The initial version of Estonia’s environmental charges system was developed during 1989–1990 as the first attempt to regulate the use of state-owned natural resources and also to economically influence contaminative activities and more sustainable use of natural resources. The initiators were deputy minister Endel Koljat and later the next deputy minister Eva Kraav (interviews A, B, and I). The idea was also supported by the Estonian Soviet Socialist Republic Committee of Forest Economy and Nature Protection. In addition, high public awareness of environmental problems and willingness to deal with these issues in Estonia was also proven by the existence of the Nature Protection Fund established in 1984, which probably was the first of its kind in the Soviet Union (SU). Some charges in the form of fines were also used in Soviet Estonia to protect the sea from pollution (interviews F, G, and H).

During the change from the 1980s to the 1990s, old EU countries did not pay much attention to environmental charges (interviews A, E, and I). They were more focused on taxes for increasing state budgets. Also the OECD’s interest and support for charges was weak. For Estonia, still the most decisive example was the environmental charges system developed and implemented in Western Germany, about which the Finnish researcher Markku Wallin wrote a relevant and substantial brochure that was used in Estonia (interview A). In addition, the theory of regulative taxes by Arthur Pigou was known and taken into account.

During the period when Estonia became independent nature protection became very popular because it enabled active people to converge and express their antipathy toward the prevailing system (e.g. the phosphorite war). Regardless of the rhetoric, the practice showed that there were still enormous problems with pollution from industries (the oil shale electricity production, cement and paper production, etc.), army bases, agriculture, and problems with water and sewage systems just to name the main fields (interviews D and E).

Differently from environmental taxes used in the West, the aim of introducing environmental charges was understandably to generate resources for financing environmental protection projects and to fight against environmental problems in the independent Republic of Estonia (all interviewees). The instrument was also attractive to politicians as the young independent state needed resources for building up the system. Though environmental
protection projects in the 1990s were quite often funded by neighboring countries like Finland and Sweden, there was still a need for national cofinancing that was taken from the gathered charges (interviews E and F). The need for environmental accounting and monitoring can be seen as an additional cause and aim of developing the system (interviews D and J).

On the one hand, another favourable condition was that local polluting companies and users of natural resources were weak and had no unions (interview I). On the other hand, the economic situation did not allow introducing high rates, and the interest of entrepreneurs had to be taken into account. The dialog was between the green movement and researchers on one side and the entrepreneurs on the other. All necessary interest group opinions had to be considered, the elaboration and development of the environmental charges system evolved hand in hand with entrepreneurs (interview I). The aim was not to raise the electricity price rapidly and harm competitiveness. The government tried to consider the interests of companies because too high charge rates would have decreased economic growth and, therefore, initially the rates were planned to be very low.

The 2000s and the turning point in 2005

In the 2000s, besides the examples and practices of neighbor countries and the environmental leaders in the EU, also the OECD’s support and suggestions in spreading the positive experience and best practices in using economic instruments in environmental policy were held relevant in the development of Estonia’s environmental taxes and charges system (interview I). However, in the Estonian context the importance of other countries’ best practices should not be overestimated because clear transfer of policies cannot be detected (interviews A, E, F, I, and J). In addition, as other countries were behind in the use of environmental charges there was not much to take over (interview A). Another international factor that has affected the development of environmental charges is related to the fact that Estonia is a member of different international agreements with which it has taken voluntary obligations to decrease pollution and meet the set criteria. In many cases, the use of charges to meet these requirements has been regarded as most rational (interviews D and E).

The turning point in the development of environmental charge rates came in 2005 when the Ministry of Environment and the Ministry of Finance were governed by the same party (interviews E and I). This situation made it possible to increase the tax rates significantly in 2006 to a sufficient rate. The former developments clearly show the advantages of a small state: faster and easier discussions and agreements, and designing and implementation of new ideas and solutions.

Joining the EU affected the development of environmental charges in Estonia in four ways. First, obligations had to be fulfilled and the areas that got a transition period needed investments (interview E). Though the EU does not prescribe what kind of instruments member states have to use, it still imposes requirements, standards, rates, and levels that have to be met by member states. The states can choose by themselves which mechanisms they use to obtain the overall goals. Economic instruments (charges in particular) seemed most tempting and also rational because of the huge investments needed to meet the expected levels. Second, but linked to the first, because of the increasing need for investments after joining the EU, the function of environmental charges was also to use the collected revenue for the national co-financing that was
needed to get funding for environmental protection projects from the EU Social Cohesion Fund (interview E). Third, information flows between member states made it possible to learn from the experience of others in the context of rates and bases of charges. Estonia took after and cooperated with Germany, Denmark, the Czech Republic, France, Latvia, and Lithuania (interviews A, B, and I). Fourth, stricter and more complicated regulations and requirements make it hard for states to use only pure ‘command and control’ instruments (interview E). This pushes for more flexible and ‘softer’ measures to influence behavior. Therefore, though the EU does not interfere with the member states’ tax systems, it still influences them by setting standards and with a uniform legal system, and in the case of new member states also with the allocation of financial support.

The analysis of how the law of environmental charges has developed since 1990 shows that the general principles of environmental charges have stayed quite the same. However, during this period the names and rates of the environmental charges have changed, the exceptions to the oil shale power sector have decreased and, as the biggest effort, the voluminous ‘Environmental charges law’ was published and came into force in 2005. After the implementation of the unified Environmental charges law, changes have encompassed charge rates (the EU affiliation treaty enacts transition periods in environmental protection) and provisions of calculating and paying the charges due to day-to-day necessities. To sum up we can say that the general system of environmental charges was in place from the beginning of the 1990s, and the main changes have affected the charge rates and organizing the legislation.

Energy taxes

The fuel and electricity excise duty have not been acknowledged as environmental taxes in Estonia, although the EC, the OECD, and the International Environmental Agency regard them as such (EC 2005, 77; interviews C and K). Differently from environmental charges the revenue from the excise taxes goes to the general budget according to the ‘Alcohol, tobacco, fuel and electricity excise duty law’ and their main aim is to accumulate revenues for the state budget. In Estonia, all excise duties are organized and managed under the Ministry of Finance.

The end of the 1980s and the 1990s

At the end of the 1980s the discussion on environmental taxes was on the agenda of almost all developed countries, though it differed in scale and scope. It was also on the agenda of the SU with leading professors Goffman and Lemeshev (interview A). In Estonia, the fuel excise duty was established in 1993 with the implementation of the ‘Motor fuel excise duty law,’ which in the following years changed to the ‘Fuel excise duty law.’ The fuel excise duty was introduced to get resources for road construction (interviews E and K). Because the tax is a very common tax for covering state expenditure its introduction and development has not attracted so much interest and created so much dispute as environmental charges.

The 2000s and the accession to the EU

After joining the EU, all energy taxes moved under the control of the EU energy taxation requirements (excise duties are regulated under the EC Council Directive 92/12/EEC, and
energy taxation is regulated under the EC Council Directive 2003/96/EC\(^{11}\). Therefore, local policy-makers and interest groups had no real power in designing the instruments (interviews B, C, G, I, J, and K). From the EC’s proposal in 1992, the EU has strived toward the harmonization of energy taxes (Tews, Busch, and Jörgens 2003, 586). This has culminated in the establishment of the energy taxation directive with the aim to restructure the community framework for the taxation of energy products and electricity to decrease competition distortion, which comes from taxing energy products with different rates between different energy products and across different countries (EC 2005, 74). The establishment of the energy excise duty in Estonia in 2008 was directly motivated by the EU directives. First, the revenue from the energy tax was supposed to go to the Environmental Investment Centre (like the previous CO\(_2\) charge which was replaced by the electricity duty and was used for environmental protection), but quite soon it was channeled directly to the state budget for political reasons, for example, to balance the budget (interview K).

In 2002, the ‘Fuel excise duty law’ was united with the ‘Alcohol, tobacco, fuel and electricity excise duty law.’ In general, the changes have affected tax rates, tax bases, and also the administrative system and legal framework. The electricity excise duty was established at the beginning of 2008 with the Council Directive 2003/96/EC that also initiated changes in the related laws. To prevent double taxation, electricity producers started to pay electricity excise duty equal to the previously paid CO\(_2\) tax. Though Estonia got a transition period in the field of energy taxation to slowly establish the minimum rates, the fuel and electricity duties are still directly related to the EU directives and, therefore, the Estonian policy-makers do not obtain the common autonomy in deciding over the development of the instruments.

The EU has enacted the ‘polluter pays’ principle and environmental responsibility, but in general it does not oblige member states to implement certain environmental taxes or charges. Except in the context of excise duties, they are needed for the uniform regulation of the (energy) market. On the one hand, taxation is a completely domestic issue where the EU does not interfere. On the other hand, regarding the Common Market the EU is interested in harmonizing consumption taxes (including also fuel and electricity duties) with the aim of providing equal competition. Considering that energy taxes account for the highest share among environmental taxes and charges it is quite understandable why the EU pursues the harmonization of minimum rates. The harmonization of other environmental taxes and especially charges is more complicated because countries face different environmental problems, for example, oil shale in Estonia, nuclear energy in Sweden; the Scandinavian countries do not have the same problems with waste water as Eastern Europe, and so on. Besides, countries differ in their ability to meet payments, which is an additional reason why the implementation of uniform pollutants, activities, and rates would not be reasonable or rational.

**Discussion**

In general, the study shows that the initial development of environmental taxes and charges in Estonia was most affected by domestic factors: accumulating revenue for the state budget in the case of excise duties and accumulating revenue for managing environmental problems and more idealistically an aspiration to obtain the right level of charge rates that would support environmental protection in the case of environmental charges. The best practices of Nordic countries, Germany, and others have been important
but secondary. On the one hand, during the establishment of the Republic of Estonia many experts came to get acquainted with the Estonian taxes and charges system, and international support was offered (OECD, IMF). Also Estonian experts went to analyze foreign systems abroad to adopt best practices. On the other hand, the new state needed revenues to the state budget. Environmental protection was also very popular during the regime change because it made it possible to stand against the Soviet system. The influence of local environmental pressure groups has been relevant. Therefore, political factors should not be underestimated. The previous is in accordance with the literature on the importance of national factors and ‘administrative fit’ in the explanation of the adoption, rejection, and frequent national variations of NPIs (Tews, Busch, and Jörgens 2003; Rose 1991; Knill and Lenschow 1998; March and Olsen 1989; Hoberg 2001; Jordan 2001; Kern, Jörgens, and Jänicke 2001).

Similarly to the Nordic countries, where the implementation of economic instruments has been a natural development, in Estonia environmental charges have emerged quite naturally. The implementation process has directly been influenced by domestic environmental problems (e.g. air and water pollution) and political factors (e.g. path dependency – past practices with similar instruments). However, policy-makers were also aware of the rising popularity of economic instruments on the international level. This is in line with international practices of the adoption of the first charges with the aim to cover the cost of environmental pollution and regulative instruments (EEA 1996, 21). Although environmental pressures were strong, no direct obligation from other states, international associations, or organizations was apparent. The EU has only indirectly influenced the increase of charge rates and objects after the EU accession. The EU sets the standards, but the member state decides which measures to adopt to achieve the goal – environmental charges are not obliged by the EU.

To sum up, it can be argued that in the case of Estonia the developments with environmental charges are more related to the diffusion of ideas and the adjustment of concrete measures into the local system and context. In Busch and Jörgens’s (2005a) terms, the development and implementation of these NPIs can be related to voluntary diffusion, although direct policy transfer could not be witnessed. To a certain extent West Germany and Scandinavian countries were taken as an example, but a similar system based mainly on charges does not exist there to date. These problems that are solved with charges in Estonia are solved in the EU with command and control mechanisms – with EU requirements. In that sense Estonia can even be seen as a leader country in using environmental charges.

In the case of energy taxes, due to the influence of the EU, we can distinguish between two periods: before and after the EU accession – before the main influencing factors were domestic needs and problems detected in everyday life, and after the EU accession, meeting the obligations and requirements of the EU has shaped the design (rates and objects) of the taxes. In general, energy excise duties have dominated in the EU because they provide high tax revenue for state budgets.

As in international practice the adoption of the fuel excise duty in 1993 contributed to voluntary diffusion of NPIs because similarly to environmental charges the other two convergence mechanisms (co-operative harmonization or coercive imposition) by Busch and Jörgens (2005a) cannot be identified. Still the same NPI was already used in, for example, Scandinavian countries. The main reason for the introduction of this measure came from the need to get additional revenue into the state budget and fund road construction. Besides the spread of ideas also the transfer of concrete measures from more
experienced countries can be assumed because the idea and operation of fuel excise duty are internationally quite similar.

Since becoming an EU candidate, co-operative harmonization has taken the leading role, and in the case of the electricity excise duty, coercive imposition dominates the developments because Estonia has not been enabled to affect the design of these policies, which have been implemented in a binding form – local policy-makers did not have the usual autonomy in taking over the corresponding EU policies. Similarly to the international practice, Estonia (belonging to the EU) has to take into consideration coercive directives. Particularly the Estonian fuel and electricity excise duty was influenced by the Council Directive of EU 2003/96/EC energy taxation directive that rearranged the community’s framework in the field of energy products and electricity taxation. Although Estonia joined the EU voluntarily, the EU has authority over the member states based on directives and regulations and offers economic and political incentives in return.

Conclusions

Nowadays it is impossible to ignore the growing impact of international actors, processes, and institutions on domestic policy formation and change due to the impact of globalization, expanding collective (environmental) problems, and the need for uniform regulation in solving these problems. The spread and convergence of new EPIs cannot only be explained by the countries’ independent but same reaction to similar emerging environmental problems or the flaws of traditional (‘command and control’) instruments. However, it is a fact that in reality there are no exactly unique contexts and that is why transferred ideas cannot bring along exactly the same results. Therefore, there is a need to better understand the interactions between certain ideas and certain contexts; it is necessary to analyze the role of international convergence mechanisms and domestic factors in the adoption and spread of NPIs. However, the final formation of the system is also influenced by the special characteristics of the NPIs.

These tendencies can be linked to the general discussion about policy convergence and divergence in the European countries: whether closer interaction and communication have influenced countries to adopt similar policies and practices or have closer relations revealed systemic differences in policy rhetoric and outcomes between related jurisdictions. The main aim of this article was to clarify the importance of international convergence mechanisms of NPIs (uncoordinated diffusion, co-operative harmonization, and coercive imposition) and domestic factors in the adoption and development of the environmental taxes and charges system in Estonia. The second but not less essential aim was to shed light upon the formation process of the environmental taxes and charges system in Estonia with the example of instruments influencing the energy sector.

The article explored the impact of convergence mechanisms and local factors on the adoption and development of environmental taxes and charges as one group of new EPIs. For comparative reasons, a short analytical overview of the relationship between the spread and formation of the same instruments and specific convergence mechanisms in international practices was brought forth. In the empirical part, the exogenous and endogenous explanatory factors influencing the formation of environmental taxes and charges in the Estonian energy sector are identified through qualitative interviews with environmental policy experts and law and document analysis. This article not only
focused on estimating the importance of international causes but also the importance of local factors in adopting NPIs and shaping the environmental charges and taxes system.

The Estonian case analysis revealed that similarly to general international trends the most evident convergence mechanism of the three influencing the formation of environmental charges is interdependent but uncoordinated diffusion. The adoption of the instruments took place under intense political and environmental pressures and was possible mainly because of the suitability of the political and social situation and domestic problems of that time. Therefore, domestic factors are considered to be more important in the initial development of the instruments. Learning from the other countries and the activity of the international organizations was second-rate. Drawing on the previous statements, the Estonian case study shows that the initiatives to start dealing with environmental policy and managing environmental problems at the state level came from domestic factors not from international tendencies as usually believed in the context of CEE countries. The Estonian in-depth context analysis is therefore a distinctive case study analysis meaning that although international factors have influenced the policymaking of young CEE countries in many policy areas (also environmental policy), the analysis shows that the initial development of the environmental taxes and charges system in Estonia has been influenced predominantly by local factors and path dependency. Still, after the EU accession the need to achieve prescribed standards has influenced environmental policy and its instruments with the increase of the charge rates, differentiation and the addition of new tax objects and bases; however, the EU does not oblige member states to use environmental charges in particular. Moving to taxes, the fuel excise duty was introduced to finance the construction of highways in Estonia. Similarly to environmental charges only voluntary diffusion, learning, and emulation are evident as other mechanisms of convergence cannot be identified. However, in the further development of the fuel excise duty and the introduction and development of the electricity excise duty a clear impact of the EU through mechanisms of legal harmonization and coercive imposition is evident because local policy-makers had little if any independence and freedom in influencing the design and implementation of these instruments. Besides the role of international and local factors, the Estonian case study also shed some light on the relationship between the characteristics of the instruments (e.g. tax bases, rates, and their changes) and the development of the system (e.g. starting with low rates, widening the tax base, and increasing the rates gradually during the years to not harm the economy).

To conclude, this analysis shows clearly that to generate a consistent understanding of how certain policy instruments and their systems have been adopted and developed, a broader and more complex theoretical framework is required. Therefore, the contribution of this case to the wider study of policy convergence regarding not only how certain instruments have converged but also more importantly how the systems of instruments have developed, the integration of factors is essential. The exogenous convergence mechanisms, the endogenous local factors and context, and the special characteristics of the instruments need to be considered.

Hereafter, when the development of a system of instruments (not only the convergence of instruments) is an interest of research, the triple impact of international factors, domestic factors, and characteristics of NPIs in a comparative study of countries about the spread and convergence of NPIs would be a further considerable point of analysis. As this article dealt with the convergence of environmental taxes and charges in the aspect of their adaption and
initial development; henceforth, the convergence from policy rhetoric to real actions and nature should also be analyzed.

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Notes
1. Tews, Busch, and Jörgens (2003), Tews (2005), and Kern, Jörgens, and Jänicke (2001) have focused on the analysis of the three broad factors in the field of new EPIs’ spread and diffusion.
2. Convergence mechanisms have been explored the same way in the following works: Busch and Jörgens (2005b), Bennett (1991), Dolowitz and Marsh (2000), Tews (2005), Liefferink and Jordan (2005), and Knill and Lenschow (2005).
3. For example, the Vienna Convention together with the Montreal Protocol on substances that deplete the ozone layer, and the UN Framework Convention on climate change with the Kyoto Protocol.
5. For further reading, see, for example, ‘Estonica’ the Encyclopedia about Estonia – http://www.estonica.org/en/Phosphorite_War/.
7. Since the 1990s, the Estonian Ministry of Environment has initiated the contracting of 55 international environmental protection agreements, see – http://www.envir.ee/67252.
8. The analysis was conducted in the Estonian Official State Gazette – a database of all legal documents in Estonia (https://www.riigiteataja.ee/).

Notes on contributor
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References


Appendix 1. List of interviewees


Ojava, Pavel. Leading Inspector of the Environmental Protection Department, the Environmental Inspectorate. 1 April 2010. Authors tape recording and notes.

Rajasalu, Rene. Leading Inspector of the Environmental Protection Department, the Environmental Inspectorate. 1 April 2010. Authors tape recording and notes.
Sildnik, Reeli. Leading Inspector of the Environmental Protection Department, the Environmental Inspectorate. 1 April 2010. Authors tape recording and notes.


Nõmmann, Tea. Director of the Stockholm Environmental Institute in Tallinn. 20 April 2010. Authors notes and e-mail exchange.

Annuk, Enn-Toivo. Chief Specialist of the Customs Inspection, Estonian Tax and Customs Board. 08–11 April 2010. Authors notes and e-mail exchange.