IMPLEMENTATION OF PRO-ENVIRONMENTAL POLICY IN SMALL AND MEDIUM-SIZED ENTERPRISES IN SELECTED COUNTRIES OF CENTRAL AND EASTERN EUROPE

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ABSTRACT
Preventing degradation of the natural environment is a duty that a contemporary society has to fulfil. Global threats include mainly: the greenhouse effect, destruction of the ozone layer, loss of biodiversity, non-sustainable use of resources and reduction of the planet's capacity for absorption of pollution and waste. Preventing the negative impact of economic processes on the natural environment is one of the priorities of the EU policy. Despite their diversity, EU countries pursue their goals on their way to a green economy. An improvement in the natural environment largely depends on the pro-environmental measures taken by small and medium-sized enterprises. The aim of the study is to present and compare the present state and barriers experienced in implementation of pro-environmental policy in small and medium-sized enterprises in selected countries of Central and Eastern Europe: Lithuania, Latvia, Estonia, Poland, the Czech Republic and Slovakia.
KEYWORDS: *environmental protection, small and medium-sized enterprises, development of regions.*

JEL CODES: Q01, G11

Introduction

Among the priorities of the "Europe 2020" strategy is to achieve sustainable growth, i.e. striving to create a European economy which: uses resources effectively, is more environmentally friendly, is more competitive. Implementation of the idea of "green growth" is another opportunity for switching to modern technologies of exploiting the resources of the natural environment as well as for creating new jobs. The European Union aims to become the leader in environmental technologies and environmental protection. Therefore, it committed itself to achieving the following by 2020: reduce the carbon dioxide emission by at least 20 % (and even by 30 %, in favourable conditions) compared to the 1990 level, increase the share of renewable energy sources in the total energy consumption to 20 %; increase energy efficiency by 20 %.

The range of socio-political and economic functions performed by small and medium-sized enterprises (SME) is very wide. Therefore, such enterprises can play a key role in pro-environmental economic growth.

Purpose and research object. The aim of the study is to present and compare the present state and barriers experienced in implementation of pro-environmental policy in small and medium-sized enterprises in selected countries of Central and Eastern Europe: Lithuania, Latvia, Estonia, Poland, the Czech Republic and Slovakia. The range of the pro-environmental measures has been compared to the average EU level and to the implementation of such policies in Sweden. This country is the EU leader in environmental protection.

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Methods. Analysis of scientific literature and reports of European Commissions, comparison analysis. The empirical and graphic illustration is based on an analysis of data from European Commission reports and statistical data from international statistical institutions.

1. Environmental protection – selected aspects

By managing natural resources in an irrational way, man has become a threat to the natural environment. Excessive consumption of natural resources, energy and pollution of the natural environment poses a real threat of ecological disaster (Rockström, 2009: 472; Stern, 2007; Poskrobko, 1999; The state of Nature in the European Union, 2015). Global changes which take place in the natural environment concern mainly: the greenhouse effect, loss of biodiversity, reduction of the planet's capacity for absorption of pollution and waste.

Implementation of the idea of sustainable growth in long-term economic strategies and policies is a chance to slow down the trends which are dangerous to the future of the planet and to alleviate the existing effects (Bigg, 2011: 459; Ten priorities for Europe, 2015). Sustainable growth aims to improve the quality of life of this and future generations, which should be achieved in economic, social and environmental processes.

Environmental protection plays a very important role against the background of current globalisation processes (Dziawgo, Dziawgo, 2016: 167; Figge, Hahn, 2012: 92; Piontek, Piontek, Piontek, 2002). It is a duty of the current society to consider the future consequences of present actions (Dziawgo, 2014: 63). Therefore, production and consumption processes should be frugal, waste should be reused and ecosystem diversity should be preserved (Yi, 2013: 644; Vaneeckhaute, Meers, Michels, Buysse, Tack, 2013: 239; Hinrichs-Rehlwes, 2013: 10; Common, Stagl, 2005; Jänicke, 2012: 13; Coddington, 1993; Andrea Blengini, Busto, Fantoni, Fino, 2012: 1000).

Protection of the natural environment is an important goal of the Europe 2020 strategy implemented by the EU and its member states.

1.1. "Nature 2000" Program

Measures are taken in EU countries aimed at stopping and reversing the process of loss of biodiversity and destruction of ecosystems. Implementation of the "Nature 2000" program aims to create a pan-European network of areas of species and habitat protection in their natural environment (Nature and Biodiversity Newsletter Natura 2000, 2016; The European Union climate action, 2014). The idea behind the "Nature 2000" program lies in the protection of healthy ecosystems which serve such important purposes as: providing potable water, capturing and storage of CO_2, flood protection, prevention of coastal erosion. It is important that the area of protection of healthy ecosystems should increase by 2020. Currently, the Nature 2020 network covers over 18 percent of the EU territory. Table 1 shows the development of the Nature 2000 inland area in Central and Eastern Europe countries and Sweden.

Table 1. Nature 2000 inland area in Central and Eastern Europe countries and Sweden

Country	Nature 2000 network (terrestrial) [% land area covered]
European Union 28	18.1
Czech Republic	14.0
Estonia	17.9
Lithuania	12.1
Latvia	11.5
Poland	19.6
Slovakia	29.6
Sweden	13.8

Source: Prepared by the author based on data from the European Commission.

Among the countries under study, the largest portion of healthy ecosystems is found in Slovakia, followed by Poland and Estonia. The portion of inland Nature 2000 sites in these countries is greater than that in Sweden. Smaller portions of Nature 2000 sites are found in the Czech Republic, Lithuania and Latvia. Managing Nature 2000 sites is a key element of their protection. The main principle which applies to those areas is a ban on any actions which could have a negative impact on the condition of the environment there. It is also important that this rule applies not only to areas already approved, but also to planned Nature 2000 sites.

The need to preserve and protect biodiversity is an important goal of the pro-environmental policy of the EU and its member states.

1.2. Eco-innovation index

Developing and using modern pro-environmental technologies is important in creating an economy which effectively uses resources and which is more environmentally friendly.

An aggregated eco-innovation index is used to assess and compare the condition of pro-environmental innovation introduced in member states of the EU. The index is determined from 16 components in the following areas: outlays for eco-innovations, measures of eco-innovations, effectiveness of eco-innovations, effectiveness of managing resources, socio-economic effects. An eco-innovation index determines the state of eco-innovations in a country as compared to the EU average. Table 2 shows the development of the eco-innovation index in Central and Eastern Europe countries and Sweden.

Table 2. Eco-innovation index in Central and Eastern Europe countries and Sweden (EU = 100)

Country	Year	
	2014	2015
European Union 28	100	100
Czech Republic	71	99
Estonia	72	80
Lithuania	66	73
Latvia	52	75
Poland	42	59
Slovakia	47	72
Sweden	138	124

Source: Prepared by the author based on data from the European Commission.

Sweden leads the EU in terms of developing and implementation of modern pro-environmental solutions. Among the countries of Eastern and Central Europe, the Czech Republic and Estonia have high innovation indexes. Innovativeness of ecological measures is lower in Latvia, Lithuania and Slovakia. The level of eco-innovation is the lowest in Poland (Poland was second-last among all the EU countries in 2015). It must be noted that the principles of an environmental protection policy are based on implementing advanced modern technologies and pro-environmental measures in all sectors of the economy. Compared to 2014, the eco-innovation index has increased in all the countries of Central and Eastern Europe under study.

1.3. Waste

Production of waste is a serious issue in EU countries. One of the objectives of the EU in terms of environmental protection is to reduce the amount of waste, especially hazardous wastes which are flammable, toxic, explosive, corrosive, sensitising or carcinogenic. Penetration of the natural environment by hazardous

waste poses a serious threat to the ecosystem and to human health. Therefore, there is a need to reduce the amount of waste produced in order to lower its environmental impact. Managing waste is of great importance to environmental protection. The most common methods of waste management include: material recycling, biological treatment, processing with energy recovery and storage. The European Commission sets the legal framework whose aim is to control the entire life cycle of waste: from its production to disposal. Table 3 shows the total amount of waste and toxic waste produced in selected EU countries.

Table 3. Total amount of waste and toxic waste produced in selected EU countries (in 2012)

Country	Waste [tonnes]		Rate
	Hazardous	Total	
European Union 28	99 850 000	2 514 220 000	3.97
Czech Republic	1 481 281	23 171 358	6.39
Estonia	9 159 139	21 992 343	41.64
Lithuania	136 786	5 678 751	2.4
Latvia	95 114	2 309 581	4.11
Poland	1 737 024	163 377 949	1.06
Slovakia	370 223	8 425 384	4.39
Sweden	2 696 749	156 306 504	1.72

Source: Prepared by the author based on data from the European Commission.

The largest amount of waste is produced in Poland, followed by the Czech Republic and Estonia. The smallest amount of waste is produced in Latvia, Lithuania and Slovakia.

The greatest threat to people and the environment is posed by hazardous waste. Therefore, the way it is managed must be monitored closely. Hazardous waste is mainly recycled and utilised (apart from storage).

The largest amount of hazardous waste is produced by Estonia. Such a large portion of hazardous waste produced in Estonia is caused mainly by production of energy from oil shale. The Czech Republic is another country with a large portion of hazardous waste. The smallest portion of toxic waste is produced in Poland, followed by Lithuania, Latvia and Slovakia.

A small portion of hazardous waste is produced in Sweden. Large amounts of hazardous waste in this country are processed by biological treatment. The Swedish system of waste management is regarded as one of the best in the world.

EU regulations which apply to waste management have contributed greatly to switching to recycling and composting for processing household waste. A high level of recycling is also a consequence of the effectiveness of the policy of waste management, environmental campaigns and growing social awareness.

Table 4 shows the recycling rate of municipal waste in selected EU countries.

Table 4. Recycling rate of municipal waste [%]

Country	Year		
	2012	2013	2014
European Union 28	41.6	42.2	43.4
Czech Republic	23.2	24.2	25.4
Estonia	19.1	17.9	31.3
Lithuania	23.5	27.8	30.5
Latvia	15.8	16.9	20.5
Poland	19.6	24.2	32.3
Slovakia	13.3	10.8	10.3
Sweden	42.6	43.3	43.7

Source: Prepared by the author based on data from the European Commission.

The lowest level of waste recycling during the period under analysis and its gradual decrease was observed in Slovakia. The level of recycling is increasing yearly in other countries, with especially large growth between 2013 and 2014 observed in Estonia and in Poland. A lower level of waste recycling was observed in Slovakia, the Czech Republic and Latvia (in 2014). A much higher level of waste recycling than in these countries of Central and Eastern Europe was observed in Sweden. This country uses advanced technologies and installations for household waste processing.

2. Implementation of pro-environmental policy in the "Europe 2020" Strategy

Preventing climate change in environmental protection policy pursued by the EU is to prevent climate change by protecting the air and preventing its pollution. It is a priority to reach such levels of air quality which do not have an unacceptable impact on human health and environment condition. The community regulations lay down standards of air quality, i.e. limits and target values for air quality. The most important regulation in terms of the climate change is the Kyoto Protocol, ratified by the EU in 2002, which obligates the signatories to reduce greenhouse gas emissions by trading greenhouse emissions, joint project execution and implementation of the principles of the clean growth policy. Sustainable use of energy is another area of the EU's activities aimed at protecting the natural environment. Efforts should be made towards low-emission economy, which uses the potential of renewable energy sources to a greater extent. By implementing the "Europe 2020" strategy, EU member states aim to reduce greenhouse gas emissions by 20 % (and even by 30 % compared to the 1990 level), while at the same time increasing energy efficiency and the amount of energy from renewable sources consumed by 20 %. Table 5 shows the level of greenhouse gas emissions in selected EU countries.

Table 5. Total greenhouse gas emissions [1990 = 100]

Country	Year		
	2012	2013	2014
Czech Republic	67.88	65.87	63.45
Estonia	48.76	54.31	52.87
Lithuania	43.45	40.74	40.51
Latvia	44.58	44.33	44.04
Poland	83.93	83.11	80.35
Slovakia	58.02	57.5	54.5
Sweden	81.58	79.44	77.36

Source: Prepared by the author based on data from the European Commission.

Compared to 1990, greenhouse gas emission has decreased considerably in Lithuania, Latvia, Estonia and Slovakia. The lowest GHG emission during the period under analysis was observed in Lithuania. A moderate reduction of GHG emission compared to 1990 was observed in another group of countries which includes the Czech Republic and Poland. The lowest reduction of emissions was observed in Poland. Reduction of GHG emissions year-on-year was observed in nearly all the countries under analysis (except in Estonia, where an increase in emission took place between 2012 and 2013).

The EU policy aims to reduce the consumption of primary energy. This goal is achieved by systematic improvement of energy efficiency of production, transmission and consumption of energy. Social information campaigns also play an important role in improving energy efficiency. The aim of such campaigns is to promote pro-environmental attitudes.

Table 6 shows the level of consumption of primary energy in selected EU countries.

Table 6. Consumption of primary energy [in kgoe per 1000 EUR]

Country	Year		
	2012	2013	2014
European Union 28	130.0	128.3	122.0
Czech Republic	270.9	268.4	258.6
Estonia	367.2	396.2	386.4
Lithuania	229.9	209.3	203.3
Latvia	231.1	220.8	215.0
Poland	252.9	250.8	233.7
Slovakia	237.2	238.2	221.2
Sweden	131.8	128.4	123.1

Source: Prepared by the author based on data from the European Commission.

The largest amounts of primary energy are consumed in Estonia. Considerable amounts of such energy are consumed in the Czech Republic, Poland and Slovakia. The lowest consumption of primary energy among the countries under analysis was observed in Lithuania and Latvia. Primary energy consumption decreased in 2014 compared to 2013. Consumption of primary energy has been decreasing steadily in the other countries under study. Compared to Sweden, the amount of primary energy consumed in countries of Central and Eastern Europe is rather large. Modernisation of the energy sector in Sweden has resulted in a decrease in the portion of conventional fuels which have been largely replaced by renewable energy sources (mainly biomass and hydro-energy) and nuclear energy.

Increasing the amount of energy from renewable sources consumed in an economy is a considerable challenge to EU policy, considering: the growing demand for energy, exhaustion of traditional resources (mainly fossil fuels), natural environment pollution resulting from using traditional resources. Renewable energy sources provide an alternative to traditional primary and non-renewable energy carriers. Energy from renewable sources is energy from natural, recurring natural processes, which is obtained from non-fossil fuels (energy of water, wind, solar radiation, sea currents and tides and energy generated from solid biomass, biogas and liquid biofuels).

As part of the "Europe 2020" strategy, the EU plans to achieve by 2020 a 20 % share of renewable energy in the total energy consumed.

Table 7 shows the share of renewable energy in gross final energy consumption in selected EU countries.

Table 7. Share of renewable energy in gross final energy consumption [in %]

Country	Year		
	2012	2013	2014
European Union 28	14.3	15.0	16.0
Czech Republic	11.4	12.4	13.4
Estonia	25.8	25.9(6)	26.5
Lithuania	21.7	23.0	23.9
Latvia	35.7	37.1	38.7
Poland	10.9	11.3	11.4
Slovakia	10.1	10.4	11.6
Sweden	51.1	52.0	52.6

Source: Prepared by the author based on data from the European Commission.

Production of energy from renewable sources is growing steadily in the countries under analysis. Sweden is a country in which the goal set (for 2020) by the European Commission regarding the share of energy produced from renewable resources has already been reached and considerably exceeded. Among the countries under study, a 20 % share of energy from renewable sources has been reached in Estonia, Latvia and

Lithuania. It is noteworthy that development of renewable energy production is of key importance to implement the main goals of climate and energy policy. Increasing the consumption of renewable energy sources provides an opportunity to reduce CO_2 emission and to improve energy efficiency.

An economy can function without disruptions if it has sufficient natural resources. However, access to unlimited amounts of resources is decreasing. This is why the European Commission regards effective resource management as one of the priorities of the "Europe 2020" strategy. An increase in productivity means that the production output of goods and services is growing at the expense of smaller amounts of natural resources consumed (resources saving). Frequently, this is an effect of using modern technologies and innovative changes in patterns of production and consumption. Increasing productivity is a sign of positive changes in the economy.

Table 8 shows the level of resources productivity in selected EU countries.

Table 8. Resource productivity (EUR per kilogram)

Country	Year		
	2013	2014	2015
European Union 28	1.9622	1.9664	2.0008
Czech Republic	1.0157	1.0163	1.026
Estonia	0.4465	0.4697	0.4953
Lithuania	0.6895	0.7569	0.7983
Latvia	0.4843	0.5073	0.5039
Poland	0.5946	0.6166	0.6413
Slovakia	1.1597	1.0748	1.0382
Sweden	1.7587	1.7499	1.7442

Source: Prepared by the author based on data from the European Commission.

Among the countries of Central and Eastern Europe under study, the highest productivity of resources was observed in the Czech Republic and Slovakia. Lower productivity of resources was recorded in Lithuania, Poland, Latvia and Estonia. The lowest level of resource saving during the period under analysis was observed in Estonia. Productivity of resources is increasing in Poland, the Czech Republic, Estonia and Lithuania. A slight decrease in resource saving was observed in Latvia in 2015 compared to 2014. The economy of Slovakia is characterised by a slight decrease in productivity of resources. High productivity of resources was observed in developed EU countries. Among the countries under analysis, only Sweden is such a country.

3. The scope of execution of pro-environmental projects by small and medium-sized enterprises

The SME sector plays a very important role in the economic growth of a country. By carrying out pro-environmental projects, small and medium-sized enterprises greatly affect the level of implementation of the environmental protection policy. Operating in an increasingly competitive environment, companies create their image by including ecological aspects in strategic management.

The diagrams presented in this chapter show the range of pro-environmental measures in the SME sector in selected EU countries in 2015.

The main measures implemented in the area of environmental protection in 2015 included: recycling (Figure 1), water saving (Figure 2), raw material saving (Figure 3), energy saving (Figure 4), minimisation of waste production (Figure 5), use of renewable energy sources (Figure 6).

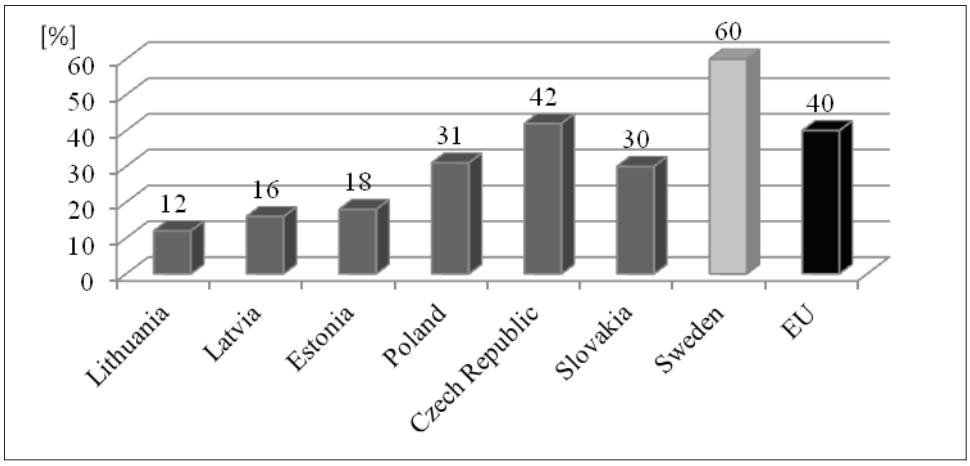

Figure 1. Recycling of waste in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Recycling is a measure employed in environmental protection whose aim is to maximise the reuse of waste while minimising outlay for their processing. Recycling is a less frequent measure of environmental protection in the SME sector in Lithuania, Latvia and Estonia. The situation is better in Poland, Slovakia and the Czech Republic. Recycling in Sweden is applied twice as often as in Slovakia.

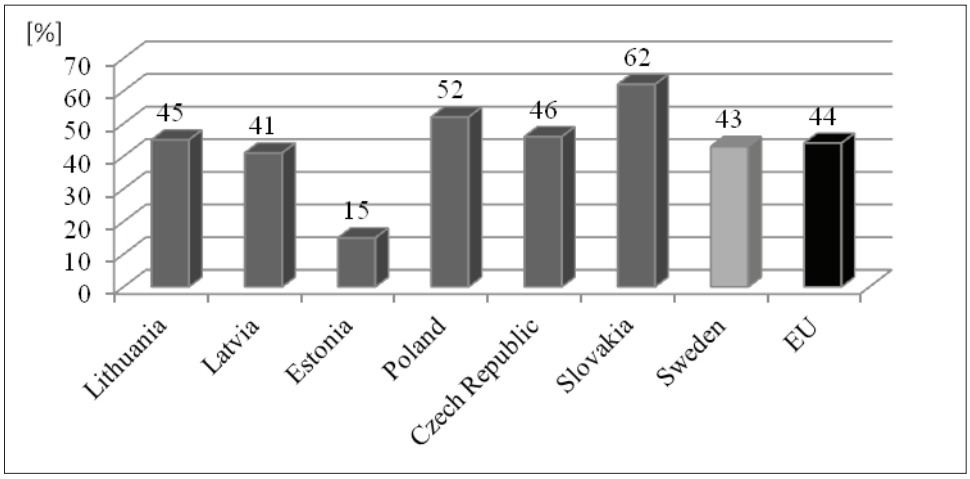

Figure 2. Saving water in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Saving water in production processes is another form of environmental protection. Saving water in the SME sector in the countries under study is the most effective in Slovakia, followed by the Czech Republic, Lithuania and Latvia. It is the least effective in Estonia. It is noteworthy that - except in Estonia and Latvia – saving water in the SME sector is more frequent in all the countries under study than in Sweden.

Saving raw materials in production processes is one of the main methods of environmental protection which is applied by SME in the EU.

Among the countries under study, saving raw materials is the most effective in Poland, followed by Latvia, Slovakia, the Czech Republic and Lithuania. It is the least developed in Estonia. Saving raw materials in Sweden is more frequent than in the countries of Central and Eastern Europe under study.

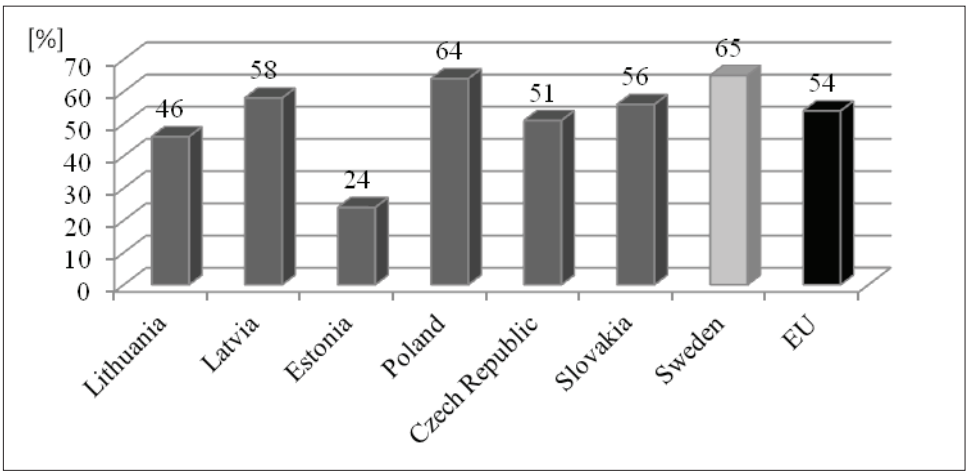

Figure 3. Saving raw materials in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

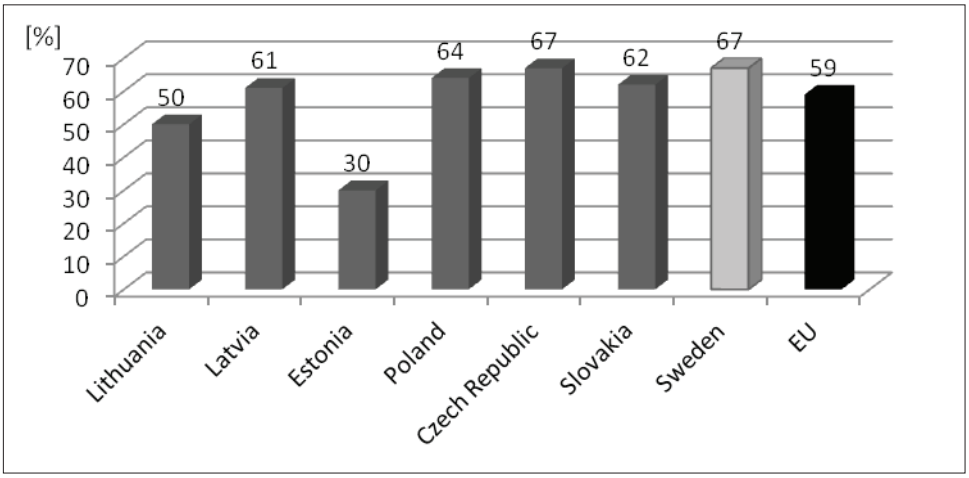

Figure 4. Saving energy in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Saving energy is the most frequent way of implementation of pro-environmental policy in small and medium-sized enterprises in selected countries of Central and Eastern Europe The situation is the best in this area of pro-environmental measures in the Czech Republic, Poland, Slovakia followed by Latvia and Lithuania. Saving energy in the SME sector in Estonia is only around half as effective as in the rest of the EU.

Minimising waste production in the SME sector is the most common way of implementation of pro-environmental policy the EU. Waste production is minimised in the Czech Republic, Slovakia and Poland more frequently than in Lithuania, Latvia and Estonia. Waste production is minimised in all the countries of Central and Eastern Europe to a lesser extent than in Sweden. Minimisation of waste production in Estonia is more than three times less frequent a form of environmental protection than in the rest of the EU.

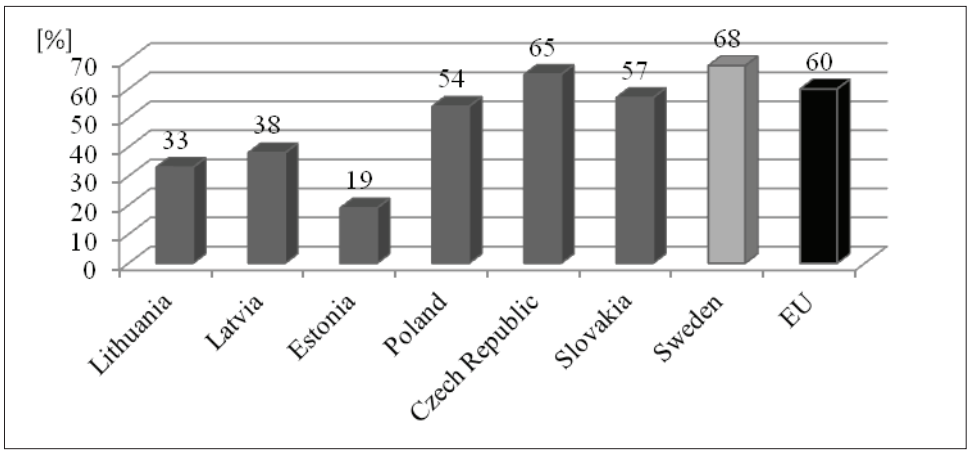

Figure 5. Minimising waste in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

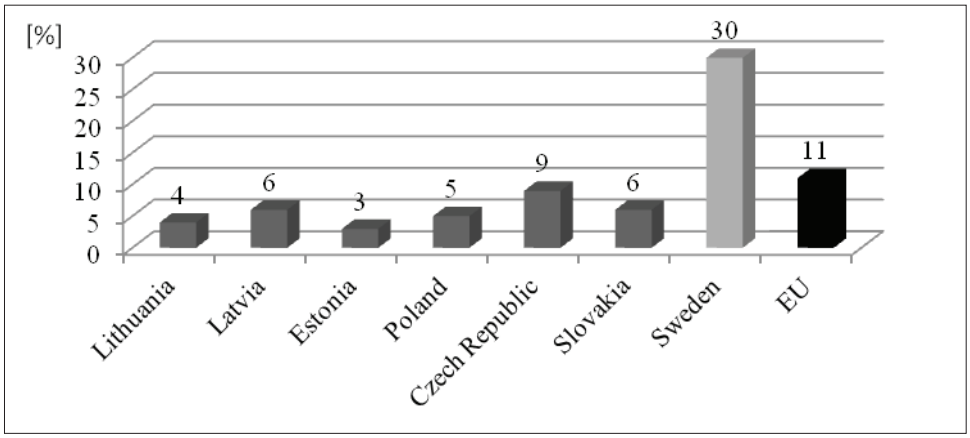

Figure 6. Using renewable energy sources in small and medium-sized enterprises in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Using renewable energy sources in the SME sector is the least common way of implementing a pro-environmental policy in the EU. Among the countries of Central and Eastern Europe, the use of renewable energy sources is the most common in the Czech Republic, followed by Slovakia and Latvia. In Poland and Lithuania, it is less than half as frequent as in the rest of the EU. The situation in this area of environmental protection is the worst in Estonia, where renewable energy sources are used ten times less frequently than in Sweden.

4. Barriers in implementation of pro-environmental policy in the small and medium-sized business sector

Enterprises adopt pro-environmental measures in response to existing legal regulations, but they are also encouraged to do so by actions of the authorities, pressure from organisations and social groups as well by market stimuli. Enterprises develop their own strategies regarding environmental protection, which may include:

- improvement of production processes;
- seeking and implementing new technologies;
- withdrawing from the market those products which could be harmful to the environment;

- giving up technologies which fail to meet environmental criteria;
- observing only the necessary regulations applicable to environmental protection.

SMEs do not always face obstacles in their pro-environmental measures. Figure 7 shows the level of absence of obstacles in the implementation of pro-environmental measures in the SME sector in 2015.

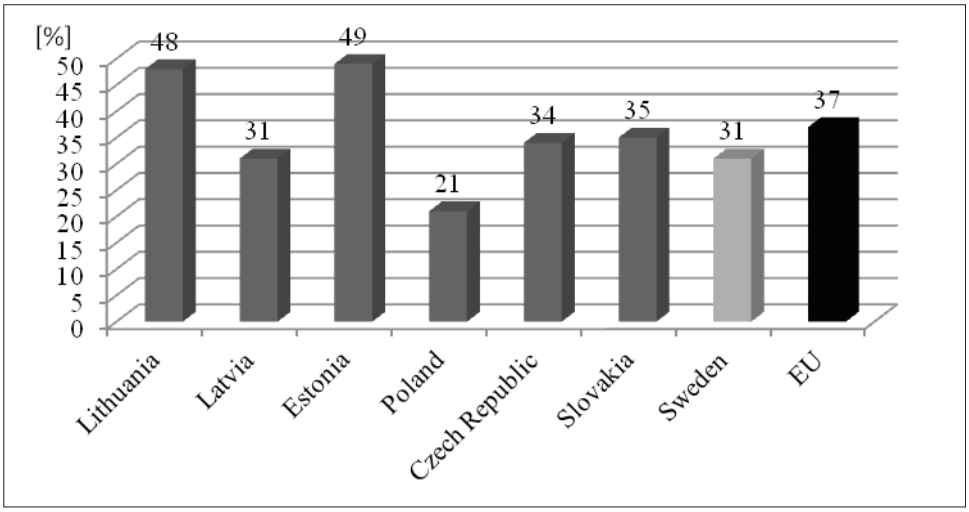

Figure 7. Level of absence of obstacles in the implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

The smallest difficulties in implementation of pro-environmental measures (much smaller than in the whole EU) are faced by SMEs in Estonia and Lithuania. Enterprises in Slovakia, the Czech Republic and Latvia find it more difficult to implement pro-environmental measures. Enterprises in Poland face the greatest difficulties in implementing pro-environmental measures.

Further figures show the barriers in implementation of environmental protection measures. The main barriers faced in implementation of pro-environmental measures include: complicated legal and administrative procedures (Figure 8), high costs (Figure 9), difficulties in obtaining environmental expert opinions (Figure 10), difficulties in implementation of modern technologies (Figure 11), lack of necessary raw materials (Figure 12).

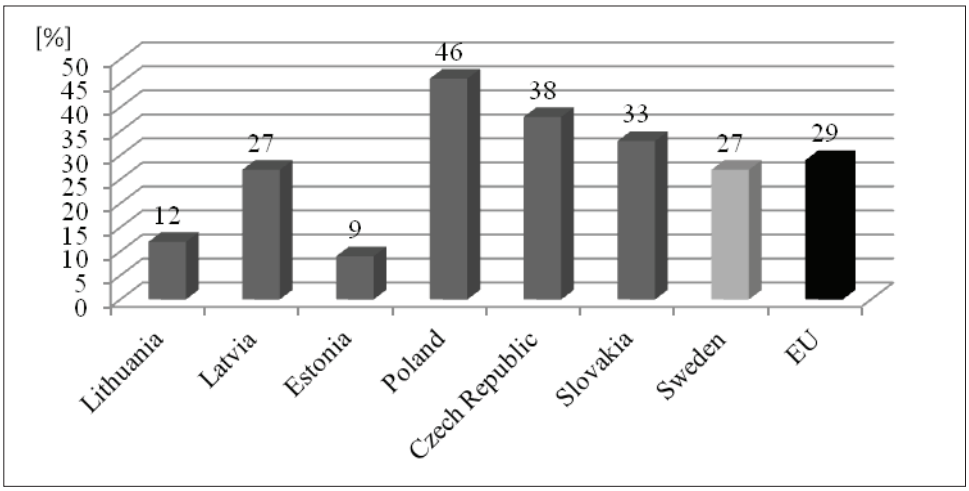

Figure 8. Complicated legal and administrative procedures as an obstacle in implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Complicated legal and administrative procedures are the greatest obstacle in implementing pro-environmental measures in Poland (much higher than the EU average), the Czech Republic, Slovakia and Latvia. Legal and administrative procedures make implementation of pro-environmental measures less difficult in Lithuania and Estonia. The level of such barriers in Estonia is three times lower than in Sweden.

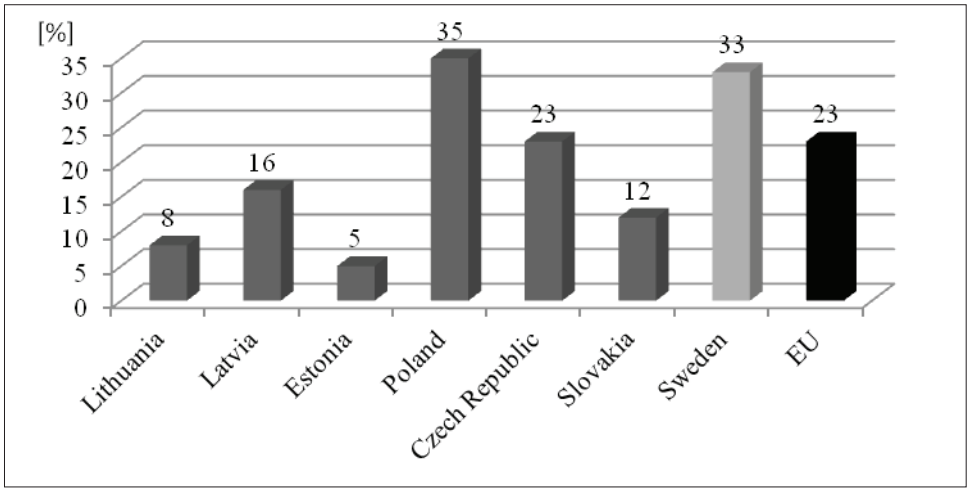

Figure 9. Costs as an obstacle in implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Costs are the greatest barrier in implementation of pro-environmental measures in Poland and the Czech Republic. Costs are less of a problem in Latvia, Slovakia and Lithuania. Costs are the smallest obstacle in implementation of pro-environmental measures taken by SMEs in Estonia (much lower than the EU average).

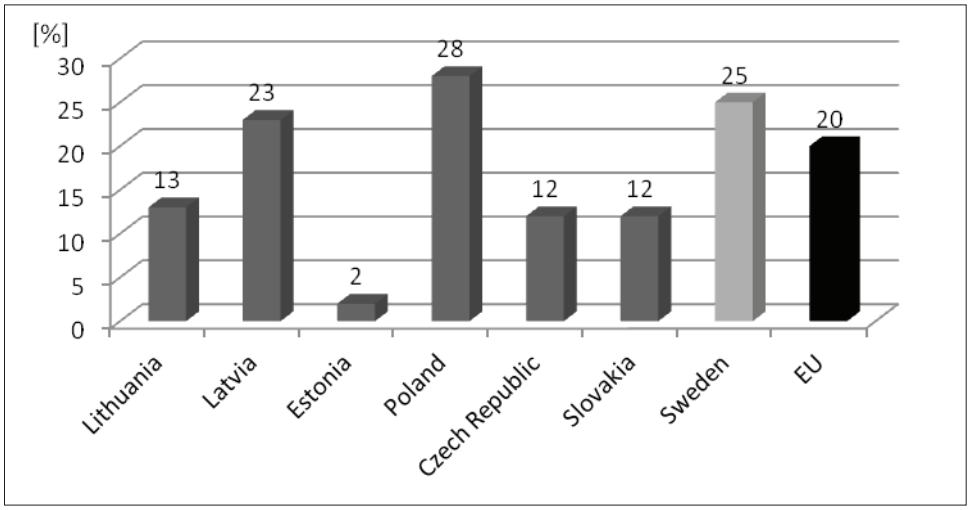

Figure 10. Difficulties in preparing environmental expert opinions as an obstacle in implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

The fewest difficulties in preparing environmental expert opinions are experienced in Estonia (ten times less than in the EU). The SME sector experiences more difficulties in preparing environmental expert opinions in Lithuania, the Czech Republic and Slovakia. The difficulties in preparing environmental expert opinions are the greatest in Latvia, and especially in Poland.

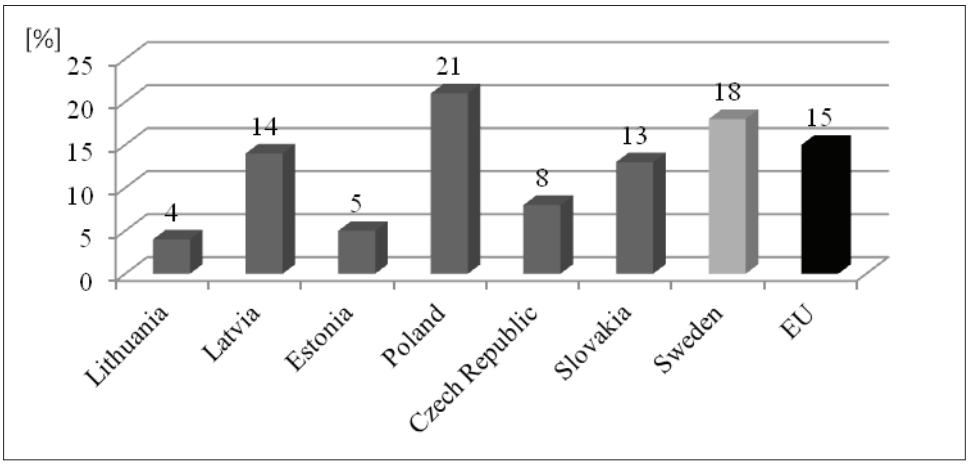

Figure 11. Difficulties in implementation of modern technologies as an obstacle in implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

Difficulties in implementation of modern technologies are experienced the most frequently in Poland, Latvia, Slovakia and the Czech Republic. Such difficulties are much loss in Estonia and Lithuania (much less than the EU average).

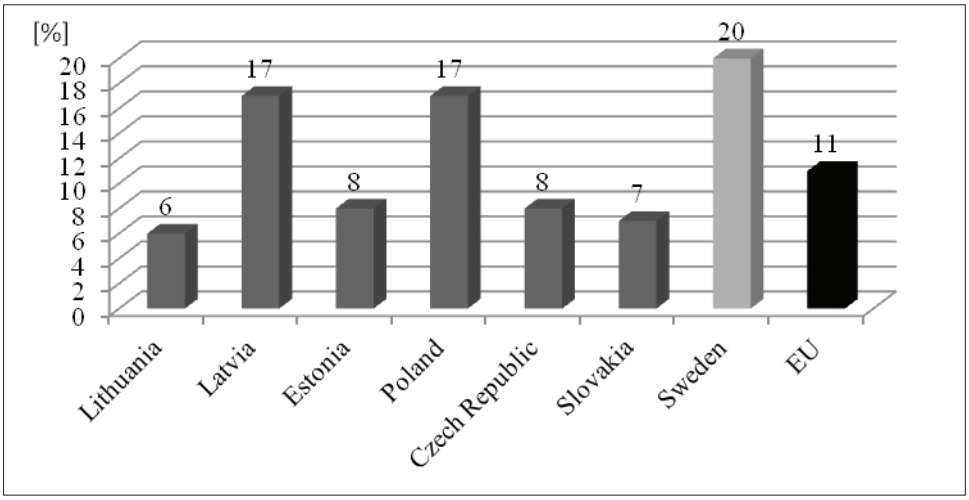

Figure 12. Shortage of the necessary resources as an obstacle in implementation of pro-environmental measures in the SME sector in selected countries of Central and Eastern Europe

Source: Prepared by the author based on data from the European Commission.

A shortage of the necessary resources makes it difficult to implement pro-environmental strategies in Latvia and Poland (it is noteworthy that it is less frequent in Sweden). This problem occurs less in Estonia, the Czech Republic, Slovakia and Lithuania (this barrier is less frequent in these countries than in the rest of the EU).

Conclusion

Looking after the environment and taking pro-environmental measures is a duty that contemporary society has to fulfil. EU member states pursue a common development strategy and implement priority measures

in environmental protection. The European Commission monitors the progress of countries on their way towards a resource-saving and low-emission economy. This analysis has shown that a great difference between the countries of Central and Eastern Europe under analysis and the EU average is observed in: introducing eco-innovations, consumption of primary energy, recycling and productivity of resources. It is positive that the goal of 20% share of energy from renewable sources has been exceeded in Estonia, Latvia and Lithuania and that emission of greenhouse gas has been considerably reduced in these countries. The eco-innovation index has been increasing steadily in the countries of Central and Eastern Europe under analysis. It is very positive because implementation of advanced technologies and pro-environmental solutions is of key importance in implementation of the environmental protection policy.

Due to the range of functions played in a country's economic growth, SMEs can have a significant contribution to preventing degradation of the natural environment. The following phenomena can be observed in small and medium-sized enterprises in the countries of Central and Eastern Europe under study:

- particular measures are taken in environmental protection in the areas of: raw material, water and energy saving, minimisation of waste production, recycling;
- the fewest measures are taken in regard to use of renewable energy sources;
- the range of measures aimed at protecting the environment in Estonia is smaller than in the other countries of Central and Eastern Europe;
- recycling and waste minimisation is applied in the Czech Republic, Slovakia and Poland more often than in Lithuania, Latvia and Estonia;
- complicated legal and administrative procedures is the greatest obstacle faced in implementation of pro-environmental policy;
- enterprises in Poland which pursue the goals of the pro-environmental policy experience difficulties more often, especially in complicated legal and administrative procedures, implementation of modern technologies and high costs of pro-environmental projects;
- the fewest obstacles in implementation of pro-environmental measures are faced by SMEs in Estonia.

By setting goals and adopting guidelines, the European Union specifies the main trend in environmental protection. The globalisation processes results in EU countries - despite their diversity - being on a path to green economy. An improvement in the natural environment largely depends on the pro-environmental measures that are also taken by small and medium-sized enterprises.

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APLINKOS APSAUGOS POLITIKOS MAŽŲ IR VIDUTINIŲ ĮMONIŲ SEKTORIUJE ĮGYVENDINIMAS KAI KURIOSE VIDURIO IR RYTŲ EUROPOS ŠALYSE

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Santrauka

Dabartinė karta turi užkirsti kelią aplinkos naikinimui. Pasaulinę grėsmę visų pirma kelia šiltnamio efektas, ozono sluoksnio plonėjimas, biologinės įvairovės nykimas, neproporcingas išteklių naudojimas, vis mažesnis planetos gebėjimas absorbuoti taršą ir atliekas.

Vienas iš Europos Sąjungos politikos prioritetų yra neigiamų ekonominių procesų poveikio aplinkai pasekmių mažinimas. ES valstybės narės, nepaisant esamų skirtumų, įgyvendina su ekologiška ekonomika susijusius numatytus tikslus.

Aplinkos apsaugai svarbi yra Europos Sąjungos valstybėse narėse įgyvendinama „Europa 2020“ strategija, kuri leis 20 % (ar net 30 %, lyginant su 1990 m.) sumažinti šiltnamio efektą sukeliančių dujų kiekį, kartu padidinant energijos vartojimo efektyvumą, ir 20 % padidinti energijos iš atsinaujinančių energijos šaltinių suvartojimą. Geresnė aplinkos apsauga visų pirma priklauso nuo mažų ir vidutinių įmonių sektoriuje įgyvendinamų ekologinių projektų.

Šiame straipsnyje pateikiama ir lyginama mažų ir vidutinių įmonių sektoriuje vykdoma aplinkos apsaugos politika, aptariamos jos įgyvendinimo kliūtys kai kuriose Vidurio ir Rytų Europos šalyse: Lietuvoje, Latvijoje, Estijoje, Lenkijoje, Čekijoje ir Slovakijoje. Įgyvendinamų aplinkos apsaugos veiksmų diapazo-

nas lyginamas su vidutiniu ES lygiu (ES-28) ir su Švedijoje, kuri yra aplinkos apsaugos lyderė Europos Sąjungoje, įgyvendinamų aplinkos apsaugos priemonių apimtimi.

Empirinė ir grafinė iliustracija parengta, remiantis Europos Komisijos ataskaitose pateiktų bei tarptautinių statistikos institucijų turimų statistinių duomenų analize.

PAGRINDINIAI ŽODŽIAI: *aplinka*, *smulkusis ir vidutinis verslas, regionų plėtra.*

JEL KLASIFIKACIJA: Q01, G11

Received: 2016.09.01
Revised: 2016.09.09
Accepted: 2016.09.20