

Administrative Costs of the Czech System of Environmental Charges

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1. ETR in the Czech Republic

- **ETR in the Czech Republic will be implemented gradually (probably in three steps)**
- **The first step includes introduction of new taxes on electricity, coal and natural gas starting from 2008**
- **The following steps (in 2010 and 2012) will probably lead to an increase in tax rates, modification of motor vehicle taxation and reforming pollution charges to CO_x taxes**

2. Administrative Costs of Environmental Taxes

Ex-ante Analysis of the Taxes Effectiveness Suggested as a Part of Environmental Tax Reform

	Revenue (CZK)	Administrative costs - relative	Number of taxpayers	Administrative costs per taxpayer (CZK)	Inflation (%)
Present situation – 2004					
Sales Tax on Petrol	67 171 400 000	0.0064	471	912732	
Road Tax	5 500 000 000	0.0647	1 658 919	215	
Suggestions					
Electric Energy Production Sales Tax					
2007	6 400 000 000	0.0279	188	949 603	
2009	12 000 000 000	0.0155	188	988 917	4.14
2011	18 500 000 000	0.0104	188	1 018 807	1.5
2013	23 500 000 000	0.0084	188	1 049 600	1.5
2015	27 300 000 000	0.0074	188	1 081 324	1.5
Road Tax					
2007	22 000 000 000	0.0623	6 142 047	223	
2009	20 400 000 000	0.0700	6 142 047	232	4.14
2011	18 800 000 000	0.0782	6 142 047	239	1.5
2013	17 300 000 000	0.0876	6 142 047	247	1.5
2015	15 800 000 000	0.0988	6 142 047	254	1.5

Source: ME and MF (2005), internal documents of the Ministry of Finance (2005), own calculations

3. Environmental Charges in the CR

- **There are four types of payments to government for restriction of externalities**
 - ◆ taxes
 - ◆ (special) charges
 - ◆ (administrative and user) charges
 - ◆ remittance (contributions)
- **Year 2005 - in the CR exist 16 different charges for environmental protection**

3. Environmental Charges in the CR

Charge	Assessment	Collection and enforcement	Revenue recipient
for consumed volume of underground water	The Czech Environmental Inspectorate (CIZP)	Czech Tax Administration (FU)	SFZP (50 %) Region (50 %)
for release of waste water to surface waters	CIZP	FU	State Environmental Fund of Czech Republic (SFZP)
for authorised release of waste water to underground waters	Municipality (fixed charge)	Municipality	Municipality
for covering administration of watercourses and basins	Administration of watercourses	Administration of watercourses	Administration of watercourses
for waste deposition	Dump operator	Dump operator FU	SFZP (risk element) Municipality (base element)
for support of collection, treatment, use and liquidation of car wrecks			SFZP
for operation of the system of accumulation, collection, transport, sorting, use and liquidation of communal waste / for communal waste	Municipality	Municipality	Municipality
registration and evidence charge as defined by the Act on Packages	x	x	SFZP

3. Environmental Charges in the CR

Charge	Assessment	Collection and enforcement	Revenue recipient
for air pollution – operators of extra large and large stationary sources	Region	FU	SFZP
for air pollution – operators of medium stationary sources	Municipalities with extended delegated authority	FU	SFZP
for air pollution – operators of small stationary sources	Municipality	Municipality	Municipality
for production and import of regulated products containing freons	CIZP	CIZP	SFZP
remittance from extraction site	District Mining Office	District Mining Office (BÚ)	Municipality
remittance from extracted minerals	District Mining Office	BÚ	Municipality (75 %) State budget (25 %)
remittance from withdrawal of land from agriculture land fund – for permanent and temporary withdrawal	Body of protection of agriculture land fund	FU	SFZP (60 %) Municipality (40 %)
for withdrawal as defined by the Act on Forests – permanent and temporary	Body of state administration of forests	FU	SFZP (60 %) Municipality (40 %)

4. Administrative Costs of the Charges

Methodology

- **method of a recalculated worker (Pudil et al. 2004); splitting employees of the examined institution according to the relation of their activity to the agenda of charges on**
 - ◆ related to charges
 - ◆ unrelated to charges
 - ◆ impossible to exactly determine
- **coefficient of how many percents of a given organisation's activity represent an agenda related to environmental charges**
- **coefficient multiplied by annual institution's expenditures => absolute value of administrative costs**
- **relative AC = absolute AC/ revenue from charges**
- **nonetheless, the government sector does not account on costs, merely on expenditures – problem of investments' inclusion**

4. Administrative Costs of the Charges

Results – water charges

	2002	2003	2004
Revenue (CZK mil.)			
» Charges for consumed volume of underground water	438.6	626.2	827
» Charges for release of waste water to surface waters	500.7	410.2	392.4
Total	939.3	1036.4	1219.4
» Administrative costs at the level of FU (CZK mil.)	39.0	37.2	37.4
» Administrative costs at the level of CIZP (CZK mil.)	8.7	9.7	9.9
Total (CZK mil.)	47.6	46.8	47.4
Relative administrative costs (%)	5.1	4.5	3.9
Sensitivity analysis			
» Lower limit (%)	4.1	3.6	3.1
» Upper limit (%)	6.1	5.4	4.7

4. Administrative Costs of the Charges

Air pollution charges

- **Stationary sources according to nominal heat output**
 - ◆ small (nominal heat output less than 0.2 MW)
 - ◆ medium (nominal heat output from 0.2 MW to 5 MW incl.)
 - ◆ large (nominal heat output from 5 MW to 50 MW)
 - ◆ extra large (nominal heat output over 50 MW)

4. Administrative Costs of the Charges

Results – air pollution charges L+ELS

Large and extra large sources (L+ELS)	2002	2003	2004
Revenue (CZK '000)	441 284	374 481	410 745
» Administrative costs at the level of FO (CZK '000)	4 826	4 967	4 663
» Administrative costs at the level of regional offices (CZK '000)	6 032	6 378	6 804
Total (CZK '000)	10 858	11 345	11 467
Relative administrative costs (%)	2.46	3.03	2.79
Sensitivity analysis			
» Lower limit (%)	1.97	2.42	2.23
» Upper limit (%)	2.95	3.64	3.35

4. Administrative Costs of the Charges

Results – air pollution charges MS

Medium sources of pollution (MS)	2003	2004	2005
Revenue (CZK '000)	31 588	25 275	25 707
» Administrative costs at the level of FO (CZK '000)	4 826	4 967	4 663
» Administrative costs at the level of authorised municipalities (CZK '000)	29 156	30 826	32 886
Total (CZK '000)	33 982	35 793	37 549
Relative administrative costs (%)	108	142	146
Sensitivity analysis			
» Lower limit (%)	86	113	117
» Upper limit (%)	129	170	175

5. Comparison with Other Taxes

Tax	Organisation authorised with collection	Administrative costs/tax revenue for 2004 (%)
Personal income tax	FU	1.17
Corporate income tax	FU	0.66
Value added tax	FU+Customs Administration (CS)	1.65
Excise tax	FU+CS	0.97
Road tax	FU	7.28
Property tax	FU	17.83
Gift tax	FU	30.43
Property transfer tax	FU	5.41
Customs	CS	1.00
Public health insurance	Health Insurance Companies (ZP)	2.18
Social insurance	The Czech Social Security Administration (CSSZ)	0.41
Total administrative costs / revenue		1.30
Charges for consumed volume of underground water and charges for release of waste water to surface waters	CIZP+FU	3.9
Charges from large and extra large sources of air pollution	Regional office (KU)+FU	3.0
Charges from medium sources of air pollution	ORPP+FU	142.0

6. AC of Environmental Instruments – International Comparison

- **Pavel, Vitek (2006) - estimated AC for energy taxes in the CR: 0,7% – 2,7%**
- **Deutscher Bundestag (2002) – AC for ecological tax reform in Germany are estimated to 0,13 % of the additional revenues**
- **Convery et al. (2005) – regularly AC for plastic bag levy in Ireland 350 ths. EURO**
- **OECD (2006) – AC for collection of *environmental charges* and evaluation of env. projects in Poland vary between 0,8 % and 4,5 %**
- **OECD (2005) – Norwegian aviation fuel tax: administrative costs for the Government related to the aviation fuel tax are *very* limited**
- **National Tax Board, Sweden, CO2 tax - incorporated into the existing petroleum tax, energy tax, and environment tax on domestic air traffic; AC for collecting 3 mill. SK**

6. AC of Environmental Instruments – International Comparison

- **OECD (2006) – high AC, examples:**
 - ◆ combination of the Climatic Change Levy, Climatic Change Agreements and CO2 emission trading scheme in UK
 - ◆ combination of the energy efficiency agreements in Denmark
 - ◆ MINAS nutrient accounting system in Netherlands

7. Conclusions

- **Current system of environmental charges is not from the perspective of administrative costs very efficient**
- **This is notably the case of charges from medium sources of air pollution**
- **Moreover, with respect to their volume, these charges also lack additional positive effects (influence on behaviour of economic subjects in a desirable direction)**
 - ◆ Kovář (1998): „ motivationally effective rate of air pollution charges has been calculated during preparatory works, but very soon it had been interpreted as politically unacceptable. The resulting charge was approximately 40 times lower than the original results of the model analysis.“

7. Conclusions

- **Charge and tax systems are uncoordinated**
- **Costliness of other charges exceeds the average of the Czech tax system by almost 2 percentage points**
- **Mentioned arguments support the effort to reform the current system of charges and their replacement by CO_x taxes.**
 - ◆ these could lead to both a decrease of AC and an increase in direct linkage between charges and behaviour of economic subjects
- **Effectiveness of the energy taxes could be relatively high because of small number of taxpayers which should pay this tax**