



CARBON TAXES FROM ECONOMIC AND LEGAL PERSPECTIVES

17th Global Conference on Environmental Taxation

22nd September 2016, Groningen, NL

Claudia Kettner, Daniela Kletzan-Slamanig, Stefan Weishaar

WIFO 



- Economic literature favours market based instruments to command and control approaches for regulating environmental externalities
- They are regarded to ensure compliance with a target at the lowest cost to society by providing flexibility for regulated entities
- The concept has already been developed in the 1920s (Pigou) but actual implementation took another 50+ years
- Most of taxes classified as environmental have been introduced for revenue raising motives
- Only few examples represent genuine environmental or carbon taxes
- The implementation generally deviates from theoretically recommendations in order to diminish social or competitiveness effects and to reach a consent with interest groups

- From a legal perspective taxes and fees have to be distinguished
 - Taxes are compulsory and unrequited payments to the general budget
 - Fees in contrast are compulsory required payments
- In economics taxes and fees are not distinguished
- For actual implementation the legal differentiation is relevant as it determines the level of the financial transfer (proportional to services rendered, ...) and the competencies of the qualified authority

The economic rationale for environmental taxes

- Pigou (1920) suggested taxes to correct market failures and to remove the difference between social and private costs
- The tax rate should be set to equal the marginal damage; polluters are faced with a uniform price signal
- Without further distortions the resulting substitution effects lead to optimal resource use and allocation
- Challenges:
 - Choice of tax base (emissions, inputs,...) and tax rate (marginal damage, standard price approach)
 - Side effects (allocation, employment, income distribution, competitiveness)
 - Use of revenues (budget, tax reduction, environmental expenditure)
 - Administrative burden

- Pearce (1991) emphasised the potential welfare gains through environmental taxation
- Revenue neutral recycling of environmental taxes can mitigate distortions from income taxation
- First dividend of an ecological tax reform is the improvement in environmental quality
- Second dividend is a reduction in excess burden and increased employment
- The debate about the strong double dividend is ongoing. Results depend on
 - Models used
 - Assumptions about demand elasticities, wage setting, unemployment etc.
 - Pre-existing inefficiencies in the tax system



Design issues from an economic point of view (1)

- Main goal of environmental taxes is inducing behavioural changes leading to a reduction of emissions or resource use
- Pursuing environmental targets can conflict with other political targets
 - Income distribution
 - taxation of essential goods has regressive effects;
 - how much short term substitution is possible?
 - targeted, temporary compensation
 - International competitiveness
 - unilaterally implemented environmental taxes would significantly raise production costs of energy intensive, polluting firms
 - generous exemptions are in place (irrespective of market, cost structure or technological options)

Design issues from an economic point of view (2)

- Compensation should not be granted by tax exemptions but in a way that ensures the mitigation incentive (reducing other distorting taxes, funding R&D, efficiency investments)
- Administrative costs
depend on the choice of the tax base and on the amount of exemptions granted
- Interaction effects with other (environmental) policy instruments
in which existing structures will the tax be integrated?
Depending on other instruments the effects can be negative or positive

Design issues from a legal point of view

- In actual implementation taxes and fees can be applied
- Different characteristics

Taxes	Fees
Levied by different levels of government agencies	
Based on policy objectives (fiscal or non-fiscal)	Quid pro quo Proportionality required (cost based)
General budget	earmarking

- EU law (192(2) TFEU 'unanimity') refers to "measures primarily of fiscal nature" => equally authentic language versions => broad definition vs. narrow definition

- Original purpose (revenue raising vs. steering effect)
- Level of governance/competences
- Coverage of the tax (energy sources, sectors, activities), tax rates and exemptions
- The share in total tax revenues and in GDP (incl. rates of change)
- The use of tax revenues; recycling mechanisms
- Environmental effectiveness (CO₂ emissions and intensities)

- Environmental taxes lead to optimal outcomes in a perfect textbook world
- The real world is not perfect and actual implementation differs from theoretical recommendations (see WP2)
- Optimal tax rates are difficult to establish
- Concessions have to be made in order to gain public acceptance
- Legal classifications matter for implementation
- Yet, the literature survey provided the base for developing the criteria for evaluation of existing taxes

Thank you!

Daniela.Kletzan-Slamanig@wifo.ac.at



Further information available at: <http://cats.wifo.ac.at/>