

Environmental Economics and Environmental Policy

No. 4

1. Three Types of Environmental Policy

Matsuoka, S. (2000), Implementation of environmental policy in the developing countries: Regulatory Instrument and their efficiency, *Journal of International Development Studies*, 9 (2), pp.11-36.

<http://www.f.waseda.jp/smatsu/>

CAC: command and control

- Emission Standard
- Technology Standard

MBIs: market based instruments

- Pollution Charge (Tax)
- Emission Rights Trading

VA: voluntary approach

- Pollution control agreement (contract, agreement)
- Certification: ISO14000, Eco-labeling
- CSR, Environment Audit

2. CAC

Efficiency and Effectiveness

Emission Standard, Performance Standard; Japan

Technology Standard; USA, EU

Government (administrative) Cost, Technical Capacity, Innovation Incentive

3. MBIs: Pollution Charge → Price Mechanism

Static Efficiency and Dynamic Efficiency

Pigovian Tax: Consumer's Surplus and Producer's Surplus

External Diseconomy

Production Function, Marginal Productivity

Cost Function, Marginal Cost

Optimal Production, $P=MC$

Marginal Abatement Cost

Pigovian Tax: Consumer's Payment, Producer's Payment

Transaction Cost

Pigovian Tax and Baumol-Oates Tax

Germany: Waste Water Charge, France: Industrial Waste Water Charge

Sweden: SO_x Tax, Holland and Swiss: Aircraft Noise Tax

China: Pollution Charge, Philippines: Waste Water Charge in Laguna Lake,

Vietnam: Waste Water Charge

Carbon Tax in European Countries

Finland 1990, Norway, Sweden, Denmark, Holland

France 17eu/CO₂t, Ireland 15eu/CO₂t

EU common carbon tax: 10/CO₂t, 2013?

4. References

Field, B. and M. K. Field (2009), *Environmental Economics: an Introduction*, 5th ed., McGraw-Hill

5. Schedule of Course Work

1. Introduction: Theory and practice of Environmental Economics and Environmental Policy (9/28)

Part 1: Historical Development of Environmental Policies

We will review the history of pollution and combating against pollution in Japan.

2. Air Pollution and Policy (10/5), (10/12 will be closed)

3. Water Pollution and Policy (10/19)

4. * Students have to make a short report and presentation about the situation of major pollution issues (air and water) and ambient standards in your home country. (10/26)

Part 2: Theory of Environmental Policies

We will see three basic types of environmental policies, Command and Control (CAC), Market Based Instruments (MBIs), and Voluntary Approach (VA) and their efficiency.

5. CAC and MBIs and the comparison of their efficiency (1) 11/2

6. CAC and MBIs and the comparison of their efficiency (2) 11/9

7. Voluntary Approaches and theory of Policy Mix 11/16

8. Climate Change Policy 11/30

9. * Students have to a short report and presentation about the pollution control policy (air, water and climate) in your home country. 12/7

Part 3: Economic Evaluation on Environmental Policy and Project

In this part, we will discuss policy evaluation and economic evaluation of environmental policy, focusing on Cost of Illness (COI), Stated Preference (SP), and Revealed Preference (RP).

10. PDCA Cycle and Policy Evaluation 12/14

11. Cost Benefit analysis in Environmental Policy 12/21

12. Economic Valuation on Environmental Policy-COI, SP and RP 1/11

13. Contingent Valuation Method (CVM) and Travel Cost Method (TCM) 1/18

14. The Design of Environmental Policy 1/25

15. * Students have to a short report and presentation about Policy Evaluation of the pollution control policy (air, water or climate) in your home country. Concluding remarks 1/25