Environmental Economics and Policy: Memo 7

1. CAC, MBIs, and VA

Mixed Regulatory Policy or Policy Mix: CAC (ES and TS), MBIs (Tax and ET), and VA Effectiveness and Efficiency of Environmental Policy EPI (Environmental Policy Integration): Policy Coherence

2. Environmental Policy Evaluation

Policy Cycle and Environmental Policy Evaluation

Policy Evaluation Criteria: single criterion and multi-criteria

- Single-criterion: Cost Benefit Analysis, Cost Effectiveness Analysis, Risk Benefit Analysis
- Multi-criteria:

OECD, 1991, DAC 5 criteria: Effectiveness, Efficiency, Impact, Sustainability, and Relevance USA, RIA: Regulatory Impact Assessment, Regan: EO 12291 (1981), Clinton: EO12866 (1993) 1994 GPRA (Government Performance and Result Act)

Japan, 2001 Law, 2005 Guideline: Needs, Efficiency, and Effectiveness (Equity, Priority)

Technical Assessment: EIA and SEA

USA 1969 NEPA, No net loss, Avoid, Minimize, and Mitigate

Japan 1984, 1997 Law, Screening and Scoping

Pollution related factors: air, water, soil, odor, noise, vibration, subsidence Natural environmental factors: fauna, flora, ecosystem and landscape

- Social Assessment: Gender (WID, GAD), Minority, Culture, Heritage
- Economic Assessment: CBA, CEA

3. Cost Benefit Analysis in Environmental Policy

 $\begin{array}{ll} B/C=\Sigma & (Bn / (1+r)^{n-1}) / \Sigma & (Cn / (1+r)^{n-1}) \\ NPB &= \Sigma & (Bn / (1+r)^{n-1}) &- \Sigma & (Cn / (1+r)^{n-1}) \\ Benefit stream \\ Cost stream \\ SDR: Social Discount Ration: Social time preference and Marginal return of capital \\ \end{array}$

5 main steps:

List of alternatives
Items of cost and items of benefit
Technical measurements of cost items and benefit items
Monetary assessments of technical cost and benefit items
Comparison CB ratio (B/C) or NPB (Net Present Benefit)

References

*Kochi, I., S. Matsuoka, M. A. Memon, and H. Shirakawa (2001), "Cost benefit analysis of the sulfur dioxide emissions control policy in Japan", *Environmental Economics and Policy Studies*, 4(4), pp.219-233.

*Boardman, A.E., D. H. Greenberg, A. R. Vining, and D. L. Weimer (2006), *Cost-Benefit Analysis: Concept and Practice (3rd ed.)*, Person Prentice Hall.

Schedule

1. Introduction 9/26

Part I : Theory of Environmental Economics and Environmental Policies

2-6. CAC and MBIs and the comparison of their efficiency 10/6, 10/13, 10/27, 11/10, 11/17

7. Voluntary Approaches, Water Pollution Policy, Climate Change Policy 11/17, 11/24

 $\underline{Part\,II}:Economic \ Evaluation \ on \ Environmental \ policy \ and \ Policy \ Analysis$

8.9. Cost Benefit analysis in Environmental Policy 12/1

10.11. Economic Valuation on Environmental Policy-COI, SP and RP 12/8, 12/15

12.13. Contingent Valuation Method (CVM) and Travel Cost Method 12/22, 1/12, 1/19 (close)

14. The Design of Environmental Policy 1/26

15. Concluding remarks 2/2 (supplements)