



2016-2 Environmental Economics

Unit 7. Equimarginal principle

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This presentation slides are based on the Environmental Economics: An Introduction (The Mcgraw-Hill) 6th Edition by Barry Field and Martha k Field, which is used as a textbook for this class.

- **Equimarginal principle**

- ✓ originally associated with consumption theory and the law is called 'the law of equi-marginal utility
- ✓ a utility maximizing consumer distributes his consumption expenditure between various goods and services he consumes in such a way that the marginal utility derived from each unit of expenditure on various goods and services is the same

$$\frac{MU_1}{P_1} = \frac{MU_2}{P_2} = \frac{MU_3}{P_3} = \dots = \frac{MU_n}{P_n}$$

- **Equimarginal principle (production)**
 - ✓ If you have multiple sources to produce a given product, and you want to minimize the total cost of producing a given quantity of that output, distribute the production is such a way as to equalize the marginal costs between the production sources.

- **Question of equimarginal principle**
 - ✓ If two-plant firm wants to produce total output of 100 units, how many unit each firm should produce at the lease total cost?

Willingness to pay

- Revealed preference methods : individuals' choices so as to uncover the implied values that have led them to make these decisions. Individuals are essentially revealing their underlying values.
- Stated preference approaches : asking people directly what their willingness to pay are.

Problems in benefit estimation

- discounting
- Willingness to pay versus willingness to accept
- Nonuse value