Chapter 8

정책평가모형
## (비용-편익 vs. 비용-효과분석)

A. 비용편익분석(Cost-Benefit Analysis)

One maximizes benefits relative to costs when the marginal, or incremental, benefit is just equal to the marginal cost, assuming declining marginal benefits and either constant or increasing marginal costs.

Cost-benefit analysis can only be used when monetary values can be assigned to benefits. It is used a great deal in answering questions about whether various policies or treatment methods should be adopted. It often makes use of hypothetical values for years of life or remaining years of life.

A. 비용편익분석(Cost-Benefit Analysis)
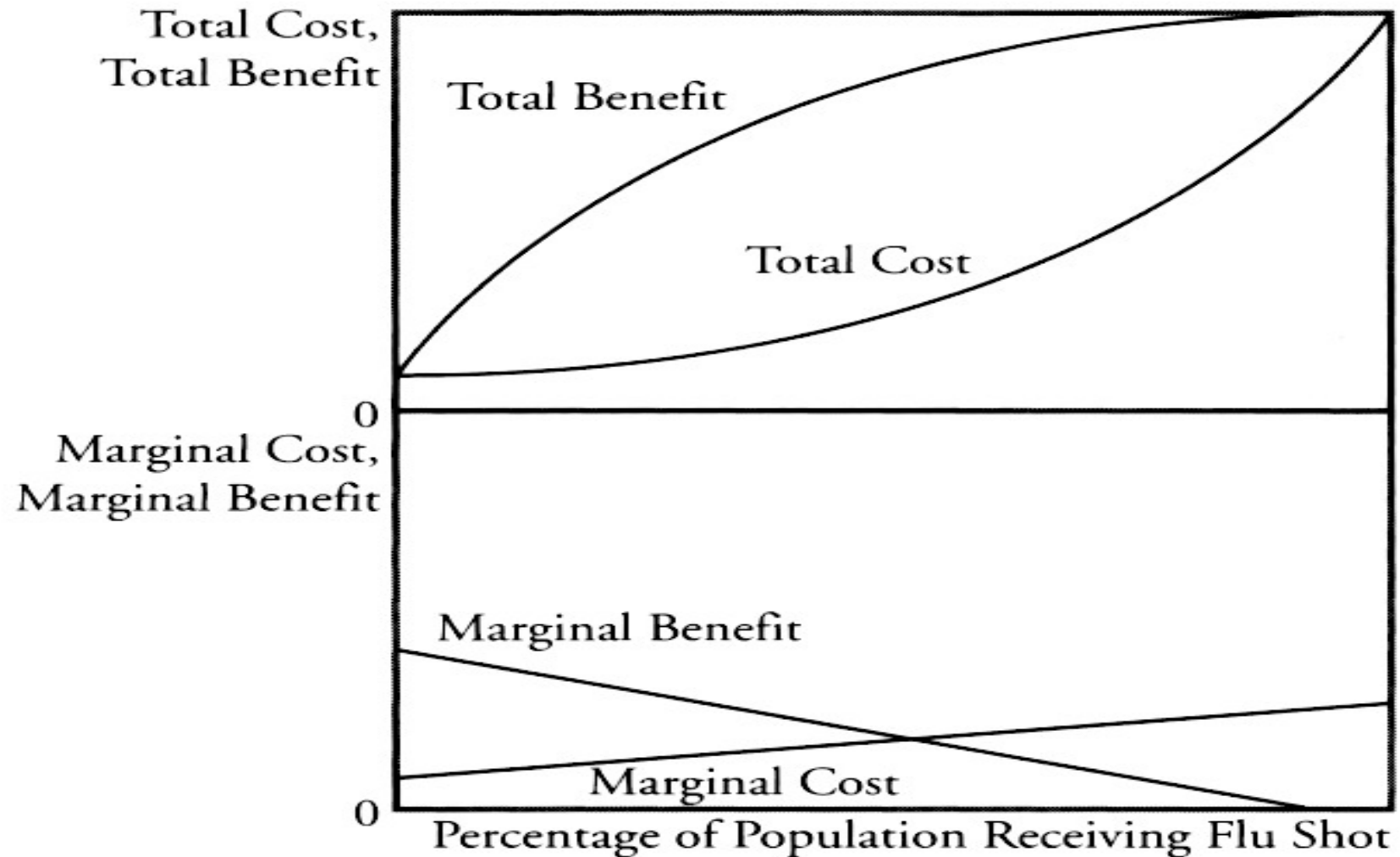
A. 비용편익분석(Cost-Benefit Analysis)

주요문제: 편익의 결정

- Willingness-to-pay (지불의사)
- Using human capital (인적자본이론)

  - Use amount of human capital investment to approximate value of time of remaining life years

  - Use foregone earnings to value loss (note that this is what is usually done in accident and disability cases)

B. 비용-효과분석

Cost-Effectiveness Analysis (CEA) is used to compare mutually exclusive alternative ways of achieving benefits (cures, relief of symptoms, additional life-years, etc.) when costs and benefits cannot be measured using the same metric.

Cost-effectiveness analysis can never provide an answer to "Should this course of action be undertaken?" but can only evaluate whether one alternative is better than another.

For instance, it can evaluate alternative methods for treating acute heart attack, measuring benefits in degree of recovery, or length of survival, or both.

B. 비용-효과분석

Benefits may be measured in additional life-years, or in quality of life improvement.

The **Quality Adjusted Life Year (QALY, 질보정연한)** is a frequently used measure of effectiveness. QALYs are more difficult to measure than changes in length of life. Experimental methods for determining:

- The standard gamble method
- Time-tradeoffs
- Rating on a scale

B. 비용-효과분석

The Standard Gamble Method

Example: An individual might be asked to choose between the option of no treatment with partially impaired health and a risky treatment that could either lead to a better or worse health state.

The Time-trade-off Method

Example: An individual might be asked, "How much time in perfect health would your trade for a year in the current state of health?"

Rating on a Scale

Example: An individual could be asked to rate his/her own health before and after treatment on a 1 to 10 scale.

C. 공공사업의 평가

There are many problems associated with applying cost-benefit or cost-effective analysis to public programs. They include:

1. How do you compare benefits that accrue to different people? Is age relevant, is initial state of health relevant? Do you try to equate benefits across different people or groups?

2. Should fixed costs be taken into account in figuring incremental cost-effectiveness?

3. Whose utility functions are to be used to determine policy?

C. 공공사업의 평가

4. Are health and wealth independent?

If we cannot assume this, some difficult problems in welfare theory arise.

5. Are individual utility functions the correct basis for determining what policies provide the greatest benefits relative to costs for a society?

* Note: The notion of a Rawlsian "social welfare" function is sometimes used instead of a utility-based social welfare function.