Benefit–Cost Ratio: Benefits divided by costs. An incorrect way to choose the best program using CBA.
Capital Budgeting: A procedure used to determine which investments should be selected. Includes private costs and private benefits but not factors that affect other members of society.
Consumer Surplus: The net gain from consumption calculated as the sum across units consumed of willingness to pay minus price.
Contingent Valuation: An interview procedure designed to produce valid estimates of the benefits of nontraded goods.
Cost–benefit analysis: A systematic process to choose the best alternative program that involves calculating the money equivalent of all opportunity costs and benefits and calculating (weighted or unweighted) net social benefits.
Cost-Effectiveness Analysis: A systematic way to decide between programs that have the same kind of benefit, based on social efficiency.
Equivalent Income: A method of adjusting income for differences in non-consumption attributes like family size or health status.
Hedonic Regression: A technique for estimating shadow demand curves for goods that are not separately traded but are traded in varying mixtures as part of a package of attributes. Hedonic regression calculates marginal willingness to pay for each attribute in those packages.
Kaldor-Hicks Criterion: An extension of the Pareto standard to situations in which some people are made better off and others are made worse off. A program should be adopted if the sum of the net benefits enjoyed by the winners exceeds the sum of the net losses incurred by the losers, so that it would be possible for the winners to compensate the losers and still come out ahead. The basic measure of efficiency in CBA.
Net Social Benefit: Total social benefits minus total social costs. Picking the project with the greatest net social benefit (weighted or unweighted) is the correct way to use CBA.
Outcome: The result of a program to further an organization's mission. Outcomes measure the impact of the program and are produced from organizational outputs and other inputs such as client effort.
Output: The products produced by a program that may help it to have impact on achieving its mission.
Producer Surplus: The net gain from production and distribution, calculated as the sum of price minus marginal cost of the units produced or distributed.
Secondary Effects: Spillover effects of a program due to changes in the prices of goods or factors of production. These would constitute double counting if changes in surplus from markets directly affected by the program are included.
Sensitivity Analysis: Testing the sensitivity of net social benefits to the assumptions made, by repeating CBA with different assumptions.
Shadow Demand Curve: The curve that shows what consumers would be willing to pay for each additional unit of a nontraded good.
Social Justice Weighting: An approach to counting net benefits accruing to some groups differently than other groups based on notions of social justice. Most commonly, the weights are based on the risk aversion of a person in Rawls' original position.
Social Return on Investment: A variation on CBA developed for social enterprises by the Roberts
Enterprise Development Fund. Unfortunately, the wrong criterion is recommended in SROI: using at cost–benefit ratio instead of net social benefit.

Travel Cost Method: A technique for estimating shadow demand curves for goods that are not separately traded by calculating willingness to pay travel costs to use a facility.

Utilitarian Weighting: An approach to counting net benefits accruing to some groups differently than other groups based on adding a numerical measure of individual well-being. Utilitarian weights equal the average marginal utility of income in each group.
**EXERCISES**

1. For each of the following cases, specify:

- What are the benefits?
- What are the costs?
- How can the benefits and costs be estimated using observable data?
- What is the timing of benefits and costs? How sensitive is the calculation of present values likely to be to the assumed discount rate?
- Who are the affected groups? What benefits and costs accrue to each group?
- What are the important transfers and secondary effects among these groups?

Construct a matrix for adding up the benefits and costs and identifying the distribution of benefits and costs among affected groups.

**Case 1: Flu Prevention**

A community foundation is considering whether to support an influenza prevention program that would inoculate vulnerable groups (young children, the elderly) in the region against the expected outbreak of the Liechtenstein flu this winter. The program involves publicizing the availability of flu shots and reimbursing doctors and clinics at a fixed price for the flu shots they administer to qualified recipients.

**Case 2: Upward Bound Program**

The Winding Creek School District is a low-income community concerned with the success of its student population. It is considering undertaking an Upward Bound Program that would send underprivileged high school students to a special college preparatory course in order to increase their chances of getting into, and succeeding in, college. The program would be paid for with tax dollars and a grant from the local community foundation and would be administered by a local private nonprofit school that specializes in compensatory college preparatory work. The program would use volunteer tutors from the community as well as paid staff and teachers.

2. For each of the cases above, would you want to use weights in your calculation of net benefits? Outline the pros and cons of using weights in each setting. If you used weights, what would you base them on?

3. Suppose you work for the charity Help for Homeless Munchkins, which has a program to help homeless munchkins find safe and dependable residences throughout Munchkin Country in the Land of Oz. Munchkin communities are much like human communities now that the Witch has found a permanent home under Dorothy's house. Thus, you can evaluate the charitable programs of HHM the same way as you would evaluate programs that help humans in Kansas. What are some likely benefits of the program to the community and to homeless munchkins? How would you measure these benefits in monetary terms? What tool would you use (choose between market demand curves, contingent valuation, hedonic regression, and the travel method) and how would you use that tool to calculate the money-equivalent benefit?