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VANDERBILT UNIVERSITY

Econ 353
Project Evaluation

Spring 1988
Mr. Maneschi

Office Hours: (Calhoun 211) Monday & Wednesday 1:30 - 3:00
Extension 22993

The two main "manuals" in benefit-cost analysis (BCA) applied to developing economies (LDCs) are I. M. D. Little and J. A. Mirrlees, Project Appraisal and Planning for Developing Countries (1974), an updated version of their OECD Manual of Industrial Project Analysis for Developing Countries (1968); and the UNIDO [United Nations Industrial Development Organization] Guidelines for Project Evaluation (1972), written by P. Dasgupta, S. Marglin and A. K. Sen. Many textbooks are available on BCA, with applications to both DCs and LDCs, such as

M. Bromwich, The Economics of Capital Budgeting (Penguin Books, 1976)

J. P. Gittinger, Economic Analysis of Agricultural Projects, 2nd ed. (World Bank and Johns Hopkins Press, 1982)

E. M. Gramlich, Benefit-Cost Analysis of Government Programs (Prentice-Hall, 1981)

G. Irvin, Modern Cost-Benefit Methods (1978)

D. Lal, Methods of Project Analysis: A Review (World Bank, 1974)

S. Marglin, Public Investment Criteria (1967)

E. J. Mishan, Cost-Benefit Analysis (1975 and later editions)

T. Palm and A. Qayum, Private and Public Investment Analysis (South-Western, 1985)

D. W. Pearce and C. A. Nash, The Social Appraisal of Projects: A Text in Cost-Benefit Analysis (Macmillan, 1981)

Sassone and Schaffer, Cost-Benefit Analysis: A Handbook (Academic Press, 1978)

L. Squire and H. G. van der Tak, Economic Analysis of Projects (World Bank and JHU Press, 1975)

R. Sugden and A. Williams, The Principles of Practical Cost-Benefit Analysis (Oxford University Press, 1978)

These books, as well as the references given below, have been placed on reserve. In addition, the following recent paperback on BCA applied to LDCs is available from the Vanderbilt University Bookstore:

A. Ray, Cost-Benefit Analysis: Issues and Methodologies (World Bank and JHU Press, 1984)

A useful, though somewhat dated, selection of readings on BCA is R. Layard (ed.), Cost-Benefit Analysis (Penguin Books, 1972).

Students will benefit from a careful reading of Professor Clive Bell's lecture notes on project evaluation, used last year in this course.

Course Outline and References

1. Rationale and methodology of social benefit-cost analysis

Palm and Qayum, Private and Public Investment Analysis, Ch. 1
Gramlich, Benefit-Cost Analysis of Government Programs, Chs. 1-2
UNIDO, Guidelines for Project Evaluation, Chs. 1, 3
Squire and van der Tak, Economic Analysis of Projects, Ch. 1
Layard (ed.), Cost-Benefit Analysis, Introduction, Part I (Penguin Books, 1972)
Prest and Turvey, "The Main Questions" (Reading 1 in Layard)
Little and Mirrlees, Project Appraisal and Planning for Developing Countries, Chs. 1-2
Musgrave, "Cost-Benefit Analysis and the Theory of Public Finance," (Reading 2 in Layard)
Marglin, Public Investment Criteria, Ch. 1
Irvin, Modern Cost-Benefit Methods, Ch. 4
Pearce and Nash, The Social Appraisal of Projects: A Text in Cost-Benefit Analysis, Chs. 1-3
Bell, Lecture 1

2. Investment criteria

Palm and Qayum, Chs. 2, 3, 4, 5, 9
Bromwich, The Economics of Capital Budgeting, Chs. 1, 4, 5, 10, 11
Warr, "Domestic Resource Cost as an Investment Criterion," Oxford Economic Papers, 1983, pp. 302-306.
Squire and van der Tak, Ch. 4
Bussey, The Economic Analysis of Industrial Projects, Chs. 7-8
Hirshleifer, "On the Theory of Optimal Investment Decision," Journal of Political Economy, August 1958; reprinted in Solomon, The Management of Corporate Capital
UNIDO, Ch. 2
Pearce and Nash, Ch. 4
Hicks, Capital and Time, Ch. 2
Marglin, Approaches to Dynamic Investment Planning

3. Identification of costs and benefits

Gittinger, Economic Analysis of Agricultural Projects, 2nd. ed., Ch. 2
Squire and van der Tak, Ch. 2

4. Measurement of benefits and costs; shadow pricing

* Boadway and Bruce, Welfare Economics (Blackwell, 1984), Ch. 8 ("Welfare Change Measurement in Single-Consumer Economies"), Ch. 10 ("Cost Benefit Analysis")

Drèze and Stern, "The Theory of Cost-Benefit Analysis," in Auerbach and Feldstein (eds.), Handbook of Public Economics (North Holland)
L. Taylor, Macro Models for Developing Countries, Ch. 13 ("Shadow Prices and Investment Project Evaluation"), and Appendix G
Gramlich, Chs. 4-6
Palm and Qayum, Chs. 6-7
Ray, Cost Benefit Analysis: Issues and Methodologies (World Bank, 1984), Ch. 4
Bell, Lectures 2-4 and 9
UNIDO, Chs. 4-6
Squire and van der Tak, Ch. 3
Layard, Introduction, Part 2
Harberger, "The Opportunity Costs of Public Investment Financed by Borrowing" (Reading 12 in Layard)
Maneschi, "The Shadow Pricing of Factors in a Multi-Commodity Specific-Factors Model," Canadian Journal of Economics, November 1985
McKean, "The Use of Shadow Prices" (Reading 3 in Layard)
Gittinger, Ch. 3

5. Estimation of the social discount rate

Bell, Lecture 7
Ray, Ch. 5
UNIDO, Ch. 13
Pearce and Nash, Ch. 9
Sassone and Schaffer, Cost-Benefit Analysis: A Handbook, Ch. 6
Layard, Introduction, Part 3
Squire and van der Tak, pp. 27-29, 109-117 and Appendix, pp. 139-142
Feldstein, "The Social Time Preference Rate" (Reading 9 in Layard)
Harberger, "The Opportunity Costs of Public Investment Financed by Borrowing" (op. cit.)
Berlage and Renard, "The Discount Rate in Cost-Benefit Analysis and the Choice of a Numeraire," Oxford Economic Papers, 1985, pp. 691-699

6. The treatment of risk and uncertainty

Bell, Lecture 10
Bromwich, Chs. 12-15
Pearce and Nash, Ch. 5
Palm and Qayum, Ch. 8
Reutlinger, Techniques for Project Appraisal Under Uncertainty
Pouliquen, Risk Analysis in Project Appraisal
Levy and Sarnat, Capital Investment and Financial Decisions, Ch. 13
Layard, Introduction, Part 4
Dorfman, "Decision Rules Under Uncertainty" (Reading 15 in Layard)
Arrow and Lind, "Uncertainty and the Evaluation of Public Investment Decisions" (Reading 14 in Layard)
UNIDO, Ch. 10
Squire and van der Tak, Ch. 5
Little and Mirrlees, Ch. 15

7. The shadow price of investment

UNIDO, Ch. 14
Ray, Ch. 5, pp. 83-86

8. The shadow wage rate

Bell, Lectures 5 and 6
UNIDO, Chs. 8 and 15
Ray, Appendix (pp. 137-145)
Squire and van der Tak, Chs. 8 and 11
Sen, "Feasibility Constraints: Foreign Exchange Shadow Wages" (Reading 4 in Layard)

9. The shadow exchange rate and the pricing of nontraded commodities; the calculation of accounting price ratios

UNIDO, Ch. 16
Squire and van der Tak, Chs. 9, 12
Little and Mirrlees, "The Use of World Prices" (Reading 5 in Layard)
Powers (ed.), Estimating Accounting Prices for Project Appraisal (Inter-American Development Bank, 1981), Chs. 1-3
Bacha and Taylor, "Foreign Exchange Shadow Prices: A Critical Review of Current Theories," Quarterly Journal of Economics, 1971
Dasgupta and Stiglitz, "Benefit-Cost Analysis and Trade Policies," Journal of Political Economy, January 1974
Findlay and Wellisz, "Project Evaluation, Shadow Prices, and Trade Policy," Journal of Political Economy, June 1976
Srinivasan and Bhagwati, "Shadow Prices for Project Selection in the Presence of Distortions: Effective Rates of Protection and Domestic Resource Costs" in Bhagwati (ed.), International Trade: Selected Readings, Ch. 15
Blitzer, Dasgupta and Stiglitz, "Project Appraisal and Foreign Exchange Constraints," Economic Journal, March 1981, pp. 58-74
Dinwiddy and Teal, "Project Appraisal Procedures and the Evaluation of Foreign Exchange," Economica, Feb. 1986, pp. 97-107
Taylor, op. cit., Ch. 13, pp. 205-209, based on Dornbusch, "Tariffs and Nontraded Goods," Journal of International Economics, 1974, pp. 177-186

10. Integration of efficiency and equity objectives

Boadway, "Integrating Equity and Efficiency in Applied Welfare Economics," Quarterly Journal of Economics, Nov. 1976, pp. 541-556
Ray, Chs. 2, 3, 6, 7
Gramlich, Ch. 7
Squire and van der Tak, Chs. 6, 7, 10
UNIDO, Ch. 7
Layard, Introduction, Part 5
Lal, Methods of Project Analysis: A Review, Ch. 3
Weisbrod, "Deriving an Implicit Set of Governmental Weights for Income Classes" (Reading 16 in Layard)
Irvin, Ch. 8

11. Alternative approaches to project evaluation in LDCs

Pearce and Nash, Ch. 10
Bliss, "Taxation, Cost-Benefit Analysis and Effective Protection," in Newbery and Stern (eds.), The Theory of Taxation for Developing Countries (World Bank, 1987)

Srinivasan, "General Equilibrium Theory, Project Evaluation and Economic Development," in M. Gersovitz, The Theory and Experience of Economic Development: Essays in Honor of Sir W. A. Lewis (1982)

Bell and Devarajan, "Shadow Prices for Project Evaluation under Alternative Macroeconomic Specifications," Quarterly Journal of Economics, August 1983, pp. 457-477

UNIDO, Chs. 9, 11, 12, 18

Little and Mirrlees, Ch. 18

Schwartz and Berney (eds.), Social and Economic Dimensions of Project Evaluation (Inter-American Development Bank, 1977), pp. 49-66 and pp. 199-208

Powers (ed.), Estimating Accounting Prices for Project Appraisal, Chs. 1-3

Dasgupta, "A Comparative Analysis of the UNIDO Guidelines and the OECD Manual," Bulletin of the Oxford University Institute of Economics and Statistics, February 1972

Little and Mirrlees, "A Reply to Some Criticisms of the OECD Manual," ibid.

Stewart and Streeten, "Little-Mirrlees Methods and Project Appraisal," ibid.

Lal, Methods of Project Analysis: A Review

Maneschi, "Methodologies of Project Selection in the Presence of Constraints," Economics of Planning, Vol. 18, no. 3, 1982

12. Case studies

UNIDO, Chs. 19-22

Roemer and Stern, Cases in Economic Development (1981), Part III, Case 1 (copper mine), Case 2 (rice project), Case 3 (cement plant), Case 4 (road project), Case 5 (control of schistosomiasis)

van der Tak and Ray, Economic Benefits of Road Transport Projects

Thias and Carney, Cost-Benefit Analysis in Education: A Case Study of Kenya

Powers, Ch. 4 (Paraguay), Ch. 5 (El Salvador), Ch. 6 (Ecuador), Ch. 7 (Barbados)

Little and Scott, Using Shadow Prices

Scott, MacArthur and Newbery, Project Appraisal in Practice

Helmers, Project Planning and Income Distribution, Ch. 10

Pearce and Nash, Ch. 11 (Transport Projects), Ch. 12 (Materials Recycling), Ch. 13 (Nuclear Power) [These applications are primarily relevant to more developed countries.]

Gramlich, Ch. 8 (environmental impact of projects), Ch. 9 (human-investment programs)

Hufschmidt et al., Environment, Natural Systems, and Development: An Economic Valuation Guide (Johns Hopkins Press, 1983)

Dixon and Hufschmidt (eds.), Economic Valuation Techniques for the Environment: A Case Study Workbook, Ch. 2 (The Lake Burley Fishery Project), Ch. 5 (Geothermal Power Plant Project, Philippines), Ch. 8 (Water Resources Project in Thailand), Ch. 9 (Fuelwood Production and Use in the Philippines) [Johns Hopkins University Press, 1986]