

## **Cost Benefit Analysis**

**Term: Winter 2014**

**Instructor: Kaliappa Kalirajan.**

### **Course description:**

This course is intended to provide a clear understanding and guidance in the use of benefit-cost analysis while evaluating development projects that bear major resource and policy implications. This course requires a basic knowledge of microeconomics. Wherever possible, examples are used to aid the exposition. Certainly, this is not a course on welfare economics exclusively. Welfare concepts that are relevant in benefit-cost analysis will be discussed. Particular attention will be given to practical analysis with emphasis on the use of shadow prices, the use of consumers' surplus and the problems of valuing goods that do not have market prices. Students are encouraged to participate effectively in class discussions. There will be a final examination at the end of the course. Lecture notes will be distributed. Take home exercises will also be given and the answers will be discussed later in the class.

### **The course contents are:**

Lectures 1 & 2: Introduction – Development projects - The need to choose - The concept of Pareto Optimality – Actual or potential Pareto improvements – From individual to Social improvements- Pareto Optimality and Public Goods.

Lectures 3 & 4: The general principles of valuation of benefits and costs - The concept of net social benefit — Specific guidelines – The competitive market – Valuation with market prices – A sample analysis: a third international airline for Japan – Market Distortions.

Lectures 5 & 6: Valuation without market prices –Investment criteria and Project selection – Discounting to a present value – Choosing the base date for discounting.

Lectures 7 & 8: Calculating an equivalent annual cost - Issues in using the net present value rule - allowing for inflation - Concepts of the discount rate.

Lectures 9 & 10: Benchmark discount rates – Risk-neutrality and risk aversion –  
Techniques for handling uncertainty – Sensitivity analysis.

Lectures 11 & 12: Benefit-cost analysis of Health projects – Benefit-cost analysis of  
environment projects.

Lectures 13 & 14: Criticisms and limitations of benefit-cost analysis.

Lecture 15: Final Examination.

**Assessment:**

Final Examination: 100%

**Required Text:**

Tevfik F. Nas, (1996), *Cost-Benefit Analysis: Theory and Application*, Sage  
Publications, Thousand Oaks, California.

**Other Relevant Readings:**

Belli, P., J. Anderson, J. Dixon and T. Jee-Peng, (2000), *Economic Analysis of  
Investment Operations: Analytical Tools and Practical Applications*, WBI,  
World Bank, Washington, D.C.

Sinden, J.A. and D.J. Thampapillai, (1995), *Introduction to Benefit-Cost  
Analysis*, Longman, Sydney.

Sugden, R. and A. Williams, (1990), *The Principles of Practical Cost-Benefit  
Analysis*, Oxford University Press, Oxford.