

Externalities, Types of externalities- negative externality, socially optimal output, Positive externality, internalizing externalities, Coase theorem, Implications for income distribution.

Public Goods

Public goods excludable, public goods non excludable, Rivalrous and non rivalrous in consumption, Excludability and non-excludability, Concept of free rider, Asymmetric information, Adverse selection and moral hazard.

Cost Benefit Analysis

Private and social costs, Types of cost and benefits, Criteria for cost benefit analysis, Project evaluation, Concepts of NPV (Net Present Value), IRR (Internal Rate of Return) and their economic applications.

Introduction to Taxation

Desirable characteristics of a tax system, choosing among different tax system, Types of taxes- direct vs indirect taxes Tax incidence in competitive markets and without perfect competition, Equivalent Taxes, Factors affecting tax incidence.

Taxation and Economic Efficiency

Theories of taxation- The cost theory, the benefit theory, the ability to pay theory- Subjective approach, Objective approach, Progressive, Proportional and Regressive taxes, Degressive tax, specific and ad valorem tax, single and multiple taxes, Impact of tax vs incidence of a tax. Specific tax incidence, Differential tax incidence, balanced budget incidence. Concept of optimal taxation.

Deficit Financing and Public Enterprises

Consequences of Government deficits, improving the budgetary process, Managerial problems of public enterprises in Pakistan, Theories of pricing in public sector enterprises- no profit no loss theory, Managerial cost of production theory, Average cost of production theory, Theory of making profit.

Policies

Social Insurance and Security, Income Distribution and Welfare Reforms State and Local Public Economics: Overview of Fiscal Policy in Pakistan.

Recommended Books:

- Stiglitz E. Economics of The public sector, W.W. Norton & Co. (Latest Edition)
- Ted Gayer and Harvey S. Rosen. (2010). Public Finance- 10th edition.
- Ronald C. Fisher, (2006). State and local public finance-3rd edition.
- Govt of Pakistan, Economic Survey, yearly publication, Ministry of Finance, Economic Advisory Wing, Islamabad
- Reports of State Bank of Pakistan
- Reports of World Bank

Code: ECON-405

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Title: Econometrics-II

Credit Hours: 03

Objectives:

This course follows up the data analysis and data estimation techniques included in Econometrics I. The major objective of this course is to enable the student for competing in a job market where positive analysis is increasingly becoming subject to highly intensive and extensive analytical formulations, largely owing to the unprecedented and remarkable development in information technology. The main Course Contents of the course include panel data estimation techniques, identification problem and dummy dependent variable, the Logit/Probit model. Hence, this course is designed for senior undergraduates more inclined towards quantitative studies. The objective is to enable the students dive deep into complex problems of the real world economic life. The students have to learn certain computer packages like SPSS, E-views and Stata besides Excel.

Lab work

The students are required to devote at least two hours per week to computer laboratory. They have to attend classes to learn various Econometrics software for practical application of Econometric models they have learnt so far.

Course Contents

Matrix Approach of the Classical Linear Regression Model

The multiple regression (K-variable) model in matrix format, Assumptions of the model, The Least-Squares estimation procedure in matrix notation, Properties of the OLS estimators, Interpretation of the Beta coefficients ($\beta_1, \beta_2, \dots, \beta_k$), Hypothesis testing using matrix approach, Forecasting in OLS model, OLS estimation: variance-covariance matrix of estimators, Coefficient of determination, R^2 , in matrix notations, Correlation matrix.

Model Specification

Model selection criteria, Types of specification errors, Consequences of model, specification errors, Tests of specification errors, Errors of measurement, Model selection criteria, Endogeneity: where X is not fixed in repeated sampling, Nature of Endogeneity, OLS estimation in presence of Endogeneity, Detection of Endogeneity, BLUE estimator in the presence of Endogeneity, Consequences of Endogeneity in OLS estimation, Remedial measures.

Categorical Variables in regression

Nature of dummy variables, ANOVA models with qualitative variables, Regression with dummy independent variables, Logit/Probit models, Use of indicator variables, Multinomial logit/probit models.

Simultaneous Equation Models & Estimation Methods

Simultaneous equation models, Nature of simultaneous equations, Examples of simultaneous equation models from economic theory, Inconsistency of OLS estimators, Identification problem, Notations and definitions, Unidentified, exactly identified and over identified, Rules for identification, Simultaneous equation approaches to estimation, Method of indirect least squares (ILS), Method of two stage least squares (2SLS), Instrumental Variable approach to

2SLS.

Time Series Econometrics

Concept of Stationarity, Tests of Stationarity, Unit Root test, Transforming Non-stationary Time Series, ARMA and ARIMA Models, Comparison of forecast based on ARIMA and regression models, Co-integration and Error Correction Mechanism (ECM), VAR models, ARCH models.

Panel Data

Why panel data regression models, Estimation of pool data regression models, Common intercept method, fixed effects model, Least Square Dummy Variables Approach, Random effects model, Generalized Least Square Approach, Fixed effects model vs. random effects model, Hausman Specification Test.

Recommended Books:

- Stock H. J. and Watson M. W. (2003), Introduction to Econometrics, India: Pearson Education. Latest edition
- Gujarati, D. Porter, D. (2009). Basic Econometrics, McGraw-Hill Company. 5th edition
- Jeffrey M. Wooldridge J. M., (2001). Econometric Analysis of Cross Section and Panel Data”, The MIT Press, Latest edition.
- Johnston, J. & John D. (1997). Econometric Methods. The McGraw Hill Companies, Inc, Singapore. Latest edition/
- Greene W. H (latest edition), Econometrics Analysis, Pearson Education, Inc.

Code: ECON-406

Title: Development Economics-II

Credit Hours: 03

Prerequisite: Development Economics-I

Objectives:

The course objectives are: To provide an introduction to the concepts, ideas, and strategies employed in the pursuit of economic development; To develop and understand basic principles that enable critical assessment of alternative development policies and programs. To reflect on the goals and objectives, implementation strategies, and successes and failures of economic development efforts

Course Contents

The Millennium Development Goals

A case study of Pakistan

Urbanization and Rural-Urban Migration

The migration and urbanization dilemma, the role of cities, urban problems, urban formal sector, migration and economic development, economic theory of rural urban migration.

Human Capital and Contributions to Growth