

STATISTICAL METHODS FOR ECONOMIC ANALYSIS

Module -1 : Univariate Analysis

Measures of central tendency, dispersion - standard deviation, coefficient of variation, Lorenz curve, Gini concentration ratio – Skewness (simple problems).

Module -2 : Regression Analysis

Correlation, regression, simple, multiple, linear (simple problems) – OLS-assumptions-violation of assumptions - heteroscedasticity, autocorrelation and multicollinearity (concepts only). Interpretation of Co-efficients-Introduction to non-linear regression.

Module -3 : Probability and distributions

Elementary probability theory, concepts, binomial, Poisson and normal distribution.

Module -4 : Sampling Distributions

Sampling distribution, standard error-testing of hypothesis: χ^2 , F- ANOVA, testing correlation and regression coefficients.

Module -5 : Index numbers and Time Series

Uses, selection of number of items, base year price relatives-Fisher's ideal index-Factor reversal test-Time reversal test- Chain index-Base shifting – conversion of current price data into constant price data- price index numbers in India – Components of time series - Moving averages-Straight line trend-Deseasonalisation of data – Seasonal Index.

Reference:

1. Gupta, S.C. (1993), Fundamentals of Applied Statistics, S. Chand & Sons, New Delhi.
2. Speigal, M.R. (1992), Theory and Problems of Statistics, McGraw Hill Book Co., London.
3. Chou, Y. (1975), Statistics Analysis, Holt, Reinhart and Winston, New York.
4. Croxton, Crowden and Klein (1971), Applied General Statistics, Prentice Hall of India, New Delhi.
5. Nagar, A.L. and R.K. Das (1993), Basic Statistics, Oxford University Press, New Delhi.
6. Salvatore, Dominick (1982), Statistics and Econometrics, McGraw Hill, New Delhi.