[Summary]

Prediction in Linear Models and Multicollinearity

Subject:	Business Economics
Course:	B. A. (Hons.), 5th Semester, Undergraduate
Paper No. & Title:	Paper – 531 Elective Paper Q1 – Advanced Econometrics
Unit No. & Title:	Unit – 1 Relaxing the Assumptions of The Classical Linear Model
Lecture No. & Title:	Lecture – 3 Prediction in Linear Models and Multicollinearity

Summary

In this lecture, first we know about the problem of prediction in linear models. Prediction is carried out in two cases – (i) Individual prediction and (ii) Mean value prediction. Standard errors for prediction are obtained for both these cases which are helpful for applying tests of significance for prediction and also to obtain the confidence interval for the prediction. Both the cases for two variables model and its extension for k variables linear model are considered one by one.

Multicollinearity is a very important and also crucial phenomena for econometric applications. First the concept of multicollinearity is explained for both perfect as well as less than perfect multicollinearity. Practical consequences due to multicollinearity are narrated with formulae illustrating 3 variables model.

Certain methods for detecting the problem of multicollinearity are indicated. Specifically, auxilliary regression, condition index, Tolerance and variance inflation Factor are indicated. Some very commonly known and useful methods for talking the problem of multicollinearity are explained.

In particular, Klein's Eigen value approach and also the method of Ridge regression is shown in brief with main results.