[Glossary]

Autoregressive and Distributed Lag Models

Subject:	Business Economics
Course:	B. A. (Hons.), 5th Semester, Undergraduate
Paper No. & Title:	Paper – 531 Elective Paper Q1 – Advanced Econometrics
Unit No. & Title:	Unit – 3 Time Series Models
Lecture No. & Title:	Lecture – 1 Autoregressive and Distributed Lag Models

Glossary

1 DLM

It is distributed lag model. A common presentation is as $\alpha + \beta_0 X_t + \beta_1 X_{t-1} + \beta_2 X_{t-2} + \cdots + U_t$

2 ARM

It means Autoregressive model. It is presented by $Y_t = \alpha + \beta X_t + \delta Y_{t-1} + U_t$. It is auto regressive lag model of the first order.

3 Koyck's System Model

Koyck gave a transformation for converting an infinitely distributed lag model into an autoregressive model (with certain assumptions).This refers to Koyck system model.

4 Durbin h test

It is a normality test. This test is an extension of DW test. It is used for detection of auto correlation in AR models.

5 AEM

Adaptive Expectation Model. It is an application of Koyck's model. It is expressed by $Y_t = \gamma\beta_0 + \beta_1\gamma X_t + (1-\gamma)Y_{t-1} + \vartheta_t$ Where $\vartheta_t = U_t - \lambda U_{t-1}$

6 PAM

It is partial Adjustment model. Another application of Koyck's System. It is expressed by $Y_t = \delta\beta_0 + \delta\beta_1 X_t + (1-\delta)Y_{t-1} + \delta U_t$

7 IVM

Instrumental Variables method for dealing with estimation of AR models. Here proxy variables are brought in the system with an advantage of obtaining estimates.

8 Lag Operator

DL model is presented by the equation $Y_t = \mu + D(L)X_t + U_t$ Where $D(L) = \delta_0 + \delta_1 L + \cdots + \delta_s L^s$. D(L) is called Lag operator which can define different systems in DL model

9 Mean Lag

It is the length of time required for the unit change in the explanatory variable to the dependent variable Y.

10 Median Lag

It is the time required for the first half of the total change in Y following a unit sustained change in X.