

14/10/2024

## Unit - 4

# Regression Analysis

### Meaning:

The statistical tool with the help of which we are in a position to estimate the unknown value of one variable from the known value of another variable is called Regression.

### Definition:

#### Simple Regression:

The tool regression can be extended to three or more variables if we take into account only two variables, it is called Simple Regression.

#### Dependent Variable:

The variable which is the basis of Prediction is called

Independent variable. and the variable that is to be predicted is called dependent variable.

#### Regression:

Regression is the measure of the average relationship between two or



more variables in terms of original units of the data.

## Difference between Correlation and Regression

### Correlation

- \* It measures the degree of relationship between the variables.

- \* Here, variables are selected at random, that is variables should be random variables.

- \* It is applied where there is no direction of dependence. is called

- \* Here cause and effect relationship is not clear.

- \* It is not used for prediction of values.

- \* The coefficient of correlation is a relative measure.

### Regression

- \* It studies the nature of relationship between the variables.

- \* Here, the value of one variable is selected at random after fixing the values of other variable.

- \* It is applied where there is a direction of dependence.

- \* It indicates the cause and effect relationship between the variables.

- \* It is used to predict the value of one on the basis of other variable.

- \* The coefficient of regression is an absolute measure.