

Econometrics for Finance

Multiple Linear Regression Model

Example: The following data represents the demand for money (Y_i), interest rate (X_1), and investment ratios (X_2).

N	Y_i	X_1	X_2
1	22	8	6
2	23	10	7
3	18	7	5
4	9	2	2
5	14	4	3
6	20	6	4
7	21	7	4
8	18	6	3
9	16	4	3
10	19	6	3

Required:

- 1- Demand function estimation and explanation.
- 2- Calculation of the coefficient of determination (R^2), (**adjusted R^2**) and explanation.
- 3- Calculate the standard deviation (**SD**) to determine the degree of confidence of the estimates.
- 4- Calculation of the **t-test** for the significance of the estimated parameters.
- 5- Calculate the **F-test** for the function and explanation.

Note:

- The t- table in the level of significance (0.05) and degrees of freedom ($n-k=7$) equal to (1.895).
- The F- table in the level of significance (0.05) and degrees of freedom ($n-k=7$) equal to (4.74).